Place Bluebird before this species + plant for [illegible]

PERCHING SONG-BIRDS.

*****

ORDER PASSERES: PERCHING BIRDS.

SUB-ORDER OSCINES: SINGING BIRDS.
FAMILY TURDIDÆ THRUSHES BLUEBIRDS ETC.

Mountain Bluebird- Sialia currucoides.

Length: 7 ½ inches.
Male: Above beautiful cerulean blue, throat and breast paler, belly whitish.
Female: Above brownish gray, rump blue, throat and breast grayish buff, belly whitish same as in the male.
Song: A rich sweet warble interpreted by some as "Tru al ly" by others as "Purity I Oh Purity". They loose their song in the fall and only make a feeble chirp or call note.
Season:
Breeds: Breeds through the entire summer range.
Nest: In natural cavities, deserted woodpecker excavations or bird boxes, the nest usually being lined with fine grasses and sometimes with feathers.
Eggs: From three to six pale bluish white eggs.
Range: Western Saskatchewan and Alberta northward .

Two species of bluebirds inhabit the prairie provinces the eastern form occupying Manitoba and the eastern part of Saskatchewan while the mountain bluebird inhabits the western part of Saskatchewan and Alberta. The western species is even more to be commended than their eastern

often as he utters his placid notes, each one full and deliberate, the song seems like the music of a flute and an

relative. Insect matter is obtainable practically during the entire time they are with us. They arrive in early spring even earlier in this locality than the robin. The ten year average date of arrival in Alberta being April 15th, that of Saskatchewan and Manitoba would be only a few days earlier.

As far as vegetable matter is concerned the Bluebird in Canada is perfectly harmless, the small trace of fruit found in their stomach consists only of a few of the wild varities while the insect matter reaches as high as 82% the bulk of which consists of bugs, grasshoppers, and caterpillars. Grasshoppers when they can be obtained are eaten freely during the entire season, caterpillars also are a favorite food and are eaten during their entire stay with us.

Their "Purity I Oh Purity" may be heard specially during the morning and evening in all parts of their range. I have never found the bluebird in the deep woods, he seems to prefer the semi-open or park like regions especially where there are numerous cavities both natural and artificial which he may appropriate for a nesting site. I have found their nests located in deserted woodpecker cavities, natural tree cavities and even in a ledge on the edge of a cut bank and once I found one in the top of a burned stub about fifteen feet from the ground, however, after the nest was built and the eggs deposited the nest was afterwards abandoned from some unknown cause, probably on account of being in too much of an exposed position.

This bird should be induced to nest about every farm house, this can be done to a great extent by putting up properly constructed bird houses. The entrance should not be too large and no stoop should be placed in front of it, for without one the English sparrow cannot enter.

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WILLOW THRUSH;- VEERY: - Hylocichla Fuscescens Salicicola

Length: 7–7.50 inches.
Male and Female: *No eye ring.* Above evenly olive-brown, with a tawny cast. Throat buff, flecked on the sides with fine arrow-

shaped brown spots. Breast and under parts white. Bill dark above, lower mandible light. Feet light.

Song: Ringing, echo-like. Professor Ridgway indicates it thus: "Taweel 'ah—taweel 'ah, twil-ah, twil-ah!"

The Veery, the most slender and graceful of the Thrushes,

Season: Average date of arrival for ten years May 14th leaving in the fall migration the latter part of September.
Breeds; Throughout the summer range.

portion of the Middle States.

Nest: Built either upon or near the ground, of sticks and twigs like that of the Wood Thrush, but lacking the mud.

Eggs: Like Robin and Wood Thrush, of a greenish blue, but smaller than either.

Range: According to various authorities in Manitoba, Saskatchewan and Alberta northward,

The Willow Thrush is one of the most beautiful singers we have in the north woodland, its beautiful liquid notes remind one of an echo, as on a night or early morning in spring a few days after their arrival from the south they pour out their soul in sweetest song, one chiming in a few notes before another has dropped his melody, only to be taken up by another farther back in the woods and continued indefinately, one appearing to act as an echo for another. This singing is kept up almost constantly through the short summer nights.

He is partial to low damp woodland but is also seen in the upland, he is quite shy and must be approached with caution if you desire to learn his ways.

Mr. Chapman says of the Wilson Thrush of which the Willow Thrush is a western form. "He has a double personality or he may repeat the notes of some less vocally developed ancestor, for on occasions he gives utterance to an entirely uncharacteristic series of cackling notes, and even mounts high in the tree to sing a hesitating melody of the same unmusical cacks, broken, whistled calls and attempted trills".

"Fortunately, this preformance is comparatively uncommon to most of us he is known only by his strange unearthly song. His notes touch chords which no other bird's reaches, the water thrush is inspiring, the wood and hermit thrushes serenly exhalt the spirit, but the

Willow Thrush or Veery appeals to higher feeling. All the wondrous mistries of the wood find a voice in his song; He thrills us with emotions we cannot express

* 47

xxxxxxxxxxxx.

The following experiance is recorded by Mabel Osgood Wright

Suddenly from the woody banks the Veeries began their song. They had been singing by twos and threes ever since sunset, but now the sound was as of a full chorus compared to the humming of a few voices. From all sides the notes rang: "Taweel 'ah, taweel 'ah!" and then a tone lower: "twil-ah, twil-ah!" no two birds seeming to sing precisely at once but continually echoed themselves and each other. Why is not this bird called the Echo Thrush? The name would reveal its identity to any one who had ever heard the song.

The music lasted until after nine o'clock, when it died away in a whisper like a benediction of the night and the Whip-poor-will was left as sentry for the midnight hours.

2½ in here.

The thrushes are usually ground feeders and are often seen scratching among the leaves for various kinds of insects.

"O Veery!. shall I call thee bird,
Or but a wondering voice?"

GRAY-CHEEKED THRUSH - Hylocichla aliciæ aliciæ

Length: 7.50–8 inches.
Male and Female: *No eye ring.* Head and back uniform olive-brown. Throat buff and slightly speckled; sides dull grayish white, the specks running into a wash. *Cheeks gray;* bill slender.
Song: In tone like other Thrushes, but differently accented — "Wee-o, wee-o, tit-ti wee-o!" (Torrey.)

Season: Average date of arrival May 17th xxxxxxxxxxxxxxx

*****

Breeds: According to Preble from about the region of Great Slave Lake north to the tree limit but is less abundant than the Ollive-back.

Nest: Composed of mud twigs grasses etc loaated in bushes or on the ground.

Eggs: 4, greenish blue, speckled with brown.

Range: From northern prairie provinces and Labrador northward in summer wintering in central America.

This thrush is one of the rarest in this locality. It is a near relative of the Olive-backed Thrush, from which it differs from having gray sides to the head and is somewhat larger. A few of the gray cheeked Thrushes are seen every spring and fall; but even their migratory visits and very irregular. Bradford Torrey, whos white mountain experiance has brought him into intimate contact with Bicknell's Thrush (as those individuals which breed in the mountains of New York and New England are called) during its season of song, says that "... While the gray cheeks song bears an evident resemblance to Veery's... the two are so unlike in pitch and rythm that no reasonably nice ear ought ever to confound them". 18 *

The song is one of the most infrequent sounds in this locality; but I have heard it several times and have come within identifying range of the singer attracted on many different occasions and aided by Mr. [illegible] Torrey's discription and syllabichion.

OLIVE-BACKED THRUSH: Hylocichla ustulata swainsoni.

Olive-backed Thrush: *Turdus ustulatus swainsoni.*

PLATE 7.

Length: 7–7.50 inches.

Male and Female: *Yellowish eye ring.* Head and back olive-brown, deepest on wings and tail. Buff breast and throat, deepening in colour on the sides and speckled everywhere but on the throat with arrow-shaped blackish spots. Dark bill; feet pale brown.

Song: Of the same quality as the Wood Thrush's, but less inspiring, and tinged with melancholy.

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Season: Ten year average in Alberta May 15th probably occuring in Man. and Sask, a few days earlier.
Breeds: [illegible] Breeds through the entire summer range

Nest: In low trees and bushes, like that of Wood Thrush minus the mud.
Eggs: 4–5, greenish blue, freely spotted with brown.

Range: Manitoba, Saskatchewan and Alberta northward and according to some authorities northward practically as far as the limit of trees.

The Olive-backed Thrush is quite common in this locality especially in the spring at the time when the other migratory Thrushes in company with the White Throat and other sparrows appear, they hop about quite sociably scratching among the leaves for food and occasionally taking time to favor us with one of their beautiful melodies. Its identification is easy owing to the even olive color of its back, it entirely lacks the tawny warmth of its kin.

27

This colour difference of the Thrushes is tritely summed up on page 60 of Stearns & Coues's "New England Bird-life": "The Wood Thrush is tawny, turning to olive on the rump. The Hermit is olive, turning to tawny on the rump. The Olive-back is entirely olive. The Veery is entirely tawny." When seen feeding with the Wood Thrush along the garden edges, this colour difference appealed to me very plainly, as well as the greater slimness of the Olive-back.

Mr. Nehrling says that this Thrush, in company with the Veery and Wood Thrush, is killed in great hordes, by the miserable pot-hunters about New Orleans, on its return in the fall migration; so that even sober plumage is no protection, and the fact that our country is not wholly birdless goes far to prove the wonderful power that Nature uses in her struggle with the destructive side of man.

7

Veery and Wood Thrush, is killed in great hordes, by the miserable pot-hunters about New Orleans, on its return in the fall migration; so that even sober plumage is no protection, and the fact that our country is not wholly birdless goes far to prove the wonderful power that Nature uses in her struggle with the destructive side of man.

7

This wanton slaughter happily will not long continue as the International bird law will put a stop to it.

HERMIT THRUSH. Hylocichla guttata pallasi.

8

Length: 7–7.25 inches.

Male and Female: Above olive-brown, *reddening on the rump. Yellowish eye ring.* Throat, sides of neck, and breast washed with buff and thickly sprinkled with brown arrowheads growing larger on belly. Under parts white. Bill blackish above, lower mandible light; feet light brown.

Song: Flute-like, ascending. "O spheral, spheral! O holy, holy! clear away, clear away! O clear up, clear up!" (Burroughs

Season: Ten year migration average date of arrival May 18 appearing in Manitoba and Saskatchewan a few days earlier.

Breeds: Throughout the entire summer range.
Nest and eggs: Similar to those of the Veery.
Range: In summer Man. Sask. and Alberta and northward.

Burroughs says: "If we take the quality of melody as a test, the Wood Thrush, the Hermit Thrush, and the Veery Thrush stand at the head of our list of songsters." One may be very familiar with the songs of two of this trio without ever having identified the third, or at least without having heard it sing.

At the first glance the Hermit closely resembles the Wood Thrush, but a good field-glass will enable you to see the colour distinction of the back, and also that the Hermit has a more yellowish throat and that the breast spots are more acute. Its rarity differs very much according to location. It is comparatively common in the northeast, and Dr. Warren says that in Pennsylvania it is, with the exception of the Robin, the commonest of the Thrushes and breeds occasionally in some of the higher mountain districts. Here, as well as in many of the Middle States, where it is only a migrant, its full song is seldom heard. I have not found it a shy bird, not more so than the Wood Thrush, but it doubtless becomes shy in its breeding-haunts.

I made its acquaintance, several years ago, in the lane back of the garden, and had watched its rapid, nervous motions during many migrations before I heard it sing. This spring

* This spring about the middle of may while walking in the woods early one morning, I heard the unusual note and song of the hermit thrush, I brought my glasses into use and soon observed him setting on the limb of a willow some twenty yards farther back in the woods. These birds are quite shy and retiring and it is not often one gets a good view of them even with the glasses but here the view was perfect, the morning light shining full upon his olive and tawny back feathers making his identity beyond question. He was not aware of my presence and poured out the most beautiful bird song which it has ever been my lot to listen to. # * 32

~~10-6 lines~~

Among the many local names which this bird has received that given by the early settlers in the eastern United States seems to be the most appropriate; they call it the Swamp Angel. Swamp angel #

Mrs. Olive Thorne Miller tells delightfully of her pursuit of the Hermit in northern New York, where it was said to be abundant, but when she looked for him, he had always "been there" and was gone; until one day in August she saw the bird and heard the song and exclaims: "This only was lacking. . . . This crowns my summer."[1]

True lovers of nature find a certain spiritual satisfaction in the song of this bird. "In the evening twilight of a June day when all nature seemed resting in quiet, the liquid, melting, lingering notes of the solitary bird would steel out on the air and move us strangely. What was the feeling it awoke in our hearts? Was it sorryw or joy, fear or hope, memory or expectation? And while we listened, we thought the meaning of it all was coming; it was trembling on the air, and in an instant it would reach us. Then it faded, it was gone, and we could not even remember what it had been."

AMERICAN ROBIN. Planesticus migratorius migratorius.

Length: 10 inches.
Male: Above olive-gray, head black, wings dark brown, tail black with white spot on two outer quills. Entire breast brick-red. Throat streaked with black and white. White eyelids. Bill yellow, dusky at tip; feet dark.
Female: Paler throughout, resembling the autumn plumage of the male.
Song: A vigorous interrogative melody, cheerful but somewhat lacking in variety. "Do you think what you do, do you think what you do, do you think?" Call note, "Quick! Quick!"

Season: Earliest date of arrival in Alberta April 2nd latest date of arrival April 22nd average date April 13th. Man. and Sask. a few days earlier.
Breeds: Through the entire summer range.

Nest: On a horizontal branch, in a tree crotch, hedge, or strong vine. Made of small sticks, plastered more or less and lined with mud.
Eggs: 4, of the peculiar green-blue, known by the name of the bird.

Range: According to various authorityes Man. Alta. and Sask. and northward to the Artic circle including Alaska.

By the twentieth of May the Robins come flocking from the south and are seen in great numbers.

At first they sing most freely at noon or late in the afternoon, when their notes mingle with the peeping of the marsh-frogs, but with milder weather the Robin becomes the bird of dawn, whose persistent, regular melody unites the whole chorus.

From this time until late July, at morning before twilight and at intervals all through the day, he sings, varying the accentuation of the melody, even while its range remains the same. At dawn he says, "Cheerily, cheerily, cheer up, cheer up!"

While in the afternoon he says plainly, "Do you think that you do, Do you think that you do, Do you thi-n-k?"

In its breeding habits the Robin is very domestic, having learned to place a great deal of confidence in its human neighbors. It commonly selects orchards as nesting places or fearlessly builds upon the projecting shelf of a porch or under an open shed where persons pass many times a day. Open buildings and rail fences are often used, and in two instances I have known of them nesting on the ground and on one occasion in an excavation in a cut bank. The bird's confidence is rarely abused and it is generally allowed to rear its brood where ever the nest may be. Three or four young are commonly raised in a brood and two broods are usually reared in a season.

The United States department of Agriculture states that "In investigating the food of the Robin of forty two states and three Canadian provinces representing every month of the year shows that the food consisted of forty two and forty hundredths per cent animal matter and fifty seven and sixty hundredths per cent vegetable matter".

"Over 16% consists of beetles, about 1/3 of which are useful ground beetles, taken mostly in spring and fall when other insects are scarce. Grasshoppers make up about 5% per cent. of the whole food, but in August they comprise 17% per cent. Catterpillars form about 9 per cent, while the rest of the animal food about 11 per cent, is made up of various insects,

Some writers are of the opinion that the Robin

destroys a great quanity of fruit also that he is very noisy and sounds a cry of alarm when it is not necessary. I have found at times that he has interupted my still hunt for birds and caused some rare bird to hide in the deeper folage before it was possible to identify him. I do not consider this the fault of the bird and hold nothing against him on that score. I feel quite sure that those farmers and fruit growers who imagine he destroys their berries and various kinds of crops that if an investigation was made it would be found that he destroyed far more injurious insects than fruit.

"The labor is worthy of his hire" therefore should the Robin at certain seasons of the year take fruit from the farmers garden and the fruit growers orchard he is only taking what he is justly entitled to. During the time that he is rearing his families he is almost continually feeding them on soft insect matter which if allowed to go live would do the farmer an untold amount of injury.

with a few spiders, snails, and angleworms. All the grasshoppers, catterpillars, and bugs with a large portion of the beetles, are injurious, and it is safe to say that noxious insects comprise more than one-third of the Robins food."

8

The American Robin is an entirely different species from the English Robin Redbreast; the latter is a smaller bird of more compact build, with a brilliant red breast, in form resembling our Bluebird.

BLUEBIRD: Sialia sialis sialis.

Length: 6.50–7 inches.
Male: Azure-blue above. Wings blue with some dark edgings. Breast brick-red, lower parts white. Bill and feet black.
Female: Dull blue above. Breast paler and more rusty. Young with speckled breast and back.
Song: A sweet plaintive warble, seeming to say, "Dear! dear! *think* of it, *think* of it!" Burroughs says it continually calls "Purity, Purity"; in either case the accent is the same.

Season: Earliest date of arrival April 1st, latest April 24th, ten year average April 11th, Man. and Sask. probably a few days earlier.

Breeds: Throughout the summer range.

Nest: Hardly to be called a structure as it is usually merely a lining in a decayed knot hole, a bird-house, or the abandoned hole of the Woodpecker.
Eggs: 4–6, pale blue, shading sometimes to white.

Range: Manitoba and eastern Saskatchewan northward. This form probably mingles with the Mountain Bluebird of western Saskatchewan.

The Bluebird is the colour-bearer of the spring brigade, even as the Song Sparrow is the bugler. There may be snow on the ground, and the chimney nightly tells the complaint of the wind. All other signs fail, but when we see the Bluebird in his azure robe and hear his liquid notes (he is April's minstrel), we know that spring is close at hand, for in autumn and winter the blue coat is veiled with rusty-brown, as if the murky storms had cast their shadows upon it. The Bluebird's note is pleasing and mellow, mingling delightfully with the general spring chorus, but in itself it ranks more with the music of the Warblers than with its own Thrush kin. It has a rather sad tone, a trifle suggestive of complaint or pity. Heard at a distance it has a purling quality. Uttered close at hand, as when the birds go to and fro about their nests, it sounds as if their domestic arrangements were being discussed with the subdued, melancholy voice so often assumed by unwilling housewives. Then the male will fly off on a marketing expedition, murmuring to himself, "Dear, dear, *think* of it, *think* of it!" In fact, these birds seem to be practical, every-day sort of little creatures, and very seldom exhibit any tokens of affection after the nesting season begins. Yet the Bluebird is one to which romance strongly attaches us, its notes recall the first thrill of early spring, and we cannot disassociate him from blooming orchards. In the autumn he is one of the latest to call to us, the last leaf (so to speak) on the tree of beautifully coloured Song birds, from which the Oriole, Tanager, Rose-breasted Grosbeak, and Cardinal have dropped away

One of the finest but [illegible] eulogies in any [illegible] is Burroughs's chapter on this bird in "Wake Robin," to find which a greater charm than Michelet's rhapsody on the N[illegible]ale. One paragraph quoted will lead the reader to search out the whole:

"When Nature made the Bluebird she seemed to propitiate both the sky and the earth, so she gave him the color of one on his back and the hue of the other on his breast, and ordained that his appearance in spring should denote that the strife and war between these two elements was at an end. He is the peace-harbinger; in him the celestial and terrestrial strike hands and are fast friends."

GOLDEN-CROWNED KINGLET: Regulus satrapa satrapa.

Length: 4 inches.
Male: Flame-coloured crown spot edged with yellow and enclosed by black line. Above olive-green and yellowish olive, which is more decided on wings, rump, and tail. Under parts yellowish gray. Whitish line over eye. Bill and feet black.
Female: Crown yellow, no flame colour or black line.
Song: A sharp call and a few notes. Mr. Brewster gives them as, —
"Tzee-tzee-tzee-tzee, ti-ti-ter-ti-ti-ti-ti!"

Season: Average date of arrival in Alberta April 23rd Manitoba and Saskatchewan should be somewhat earlier.
Breeds: Through its entire summer range.

Nest: Bulky for the size of the bird. A ball of hair, moss, often lined with feathers, placed on the high bough of an evergreen.
Eggs: 6–10, white, thickly speckled

19-

Range: The wooded portions of Manitoba, Saskatchewan and Alberta.

The dainty little Golden-crown Kinglet shares with the Winter Wren and Humming bird the distinction of being one of the three smallest birds in Canada. It arrives in early Spring, several passing to the northward but many remaining to nest in the Spruce and Tamarack swamps. Mr Seton states

that it is a rare migrant but may breed in Manitoba. ?
A nest which I located near Edmonton Alberta was located in a Spruce swamp at an elevation of about seven feet, the nest was composed of moss closely woven together and lined with feathers.

It has a decided preference for evergreens and searches tirelessly by the hour for insects in the rough bark, but it is so very small and restless that it may easily escape notice.

The nest of this species is described by Mr. Brewster who says "

~~(the nest is described by Mr. Brewster, who says~~ that in one nest the outer walls were made of soft green mosses and lichens; near the top were feathers of the Ruffed Grouse, Hermit Thrush, and Ovenbird, ranged quills down so that they made a tent-like protection for the eggs. In the two nests which contained eggs, they were so numerous as to be piled in two layers, one above the other.

It would be interesting to know how the tiny birds manage to hatch such a quantity of eggs: whether they are turned and stirred up daily in order to bring all equally to the warmth of the body, or if perhaps the top row hatches first and the young birds, by their warmth, aid in bringing out their brothers and sisters.

The Golden-crowned Kinglet has a very weak voice consisting only of a few tzee-tzee-tzee call notes and has no song at all like the Ruby-crowned who is considered one of the finest singers in the woodland.

RUBY-CROWNED KINGLET: Regulus calendula calendula

Length: 4–4.50 inches.
Male: Vermilion spot on crown (which, however, does not always appear until the second year). Ash-gray head, back olive-gray, yellowish on tail. Wings brownish olive with yellow and white edgings. Breast and under parts yellowish gray. Edges of eyelids white. Bill black, feet dark brown.
Female: Lacking the red head spot.
Song: A thin, metallic call note, like a vibrating wire. Song full, varied, and melodious; often heard here in the spring migration.

22-9 lines

Season: Average date of arrival in Alberta April 16th
Mx Manitoba and Saskatchewan should be somewhat earlier.
Breeds: Through its entire summer range.

Nest: Very rare, only six known. Of matted hair, feathers, moss, etc. Bulky, globular, and partly pensile.

Eggs: Marked "unknown" in Coues's "Key to North American Birds," but have been more recently found. Dirty cream-white, deepening at larger end to form a ring. Some specimens are spotted.

Range: The wooded portions of Man. Sask. and Alberta.

Its call notes may be heard through the Spruce and Tamarack swamps from the time of its arrival in the Spring until the latter part of September, their song is very rich, sweet and musical. Mr. Nehrling xxxxxxxxxx speaks of their power, purety, and volume of the notes, their faultless modulation and long continuance". Dr. Coues says of it, "The Kinglet's exquisite vocalization defies description".

Ruby

Although the xxxxxx-crown Kinglet is one of the smallest birds xxxxxx in Canada its voice xxxxxxxxxxxxxxxx is equal to that of a bird three or four times its size, it has a very beautiful and high pitched song which must be heard to be appreciated.

The Kinglets have been, in common with many other attractive birds, recklessly killed for millinery purposes, but the present law in many States prohibits the sale of stuffed song-birds for such use, and this, together with the increase of public opinion against this vandalism, is not without effect; for I have never seen so many of these little sprites as during the past December.

These birds destroy myriads of insects and their eggs which are hidden from all eyes less keen than theirs, thereby cutting short the career of vast hordes of insects before they have sufficiently developed to do mischief. They are of great value to the agriculturist fruit grower and assist him wonderfully by killing grubs and larvæ .

LONG-TAILED CHICKADEE: Penthestes ataricapillus septentrionalis.

PLATE 10. FIG. 2.

Length: 5.50 inches.
Male and Female: No crest. Above gray with a brownish tinge. Crown and nape, and chin and throat black; sides of head white. Below white, shading to light gray with brown wash. Wings and tail gray with white edgings. Bill and feet lead-black.
Song: Cheerful, conversational. "Chickadee-dee-dee-dee!" varied in winter with "Day, day, day!" and a whistle "Pè-we, pè-we."
Season: A resident.
Breeds: Nearly throughout its range.
Nest: Made of all sorts of soft material,—wool, fur, feathers, and hair, placed in holes in tree stumps.
Eggs: 6–8, white, thickly sprinkled with warm brown.

Range: Manitoba, Saskatchewan and Alberta. Mr. Seton states specie is abundant along the Great Slave River to the delta. Mr. Preble states it is a rather common breeder throughout the wooded portions of the Athabasca and Mackenzie River valleys.

This hardy little fellow always cheerful and loveable, is a familiar figure in the wooded and semi-wooded portions of the country and sometimeswill be found along the slough where there is no trees except a few willows and an occasional aspen. The chickadee adepts himself to all surroundings and to all circumstances, suiting his appitite to what he can find, when insects fail, taking kindly to seds berries, cone kernals and crumbs.

In the severe winter of 1906-07 the snow in central Alberta was nearly three feet on the level this bright little fellow seemed to have a hard time to make a living during the colder months and daily visited our cabin, I placed several pieces of suit on a tree in the yard fastening them with a string, these the Chickadees visited several times each day, they also picked up scraps of braad and small particles of meat that were thrown from the neighbors table.

The Hudsonian chickadee is also found in this locality. Instead of having the black cap he wears a cap of brown, lives in more secluded places but when met with seems to be as sociable as the black cap.

The Chickadee breaks the silence of many winter days with his jovial notes, and fairly begs for companionship:—

Chic-chicadeedee! saucy note
Out of sound heart and merry throat,
As if it said, "Good day, good sir!
Fine afternoon, old passenger!
Happy to meet you in these places,
Where January brings few faces."—R. W. Emerson.

CATBIRD: Dumetella carolinensis.

Plate 13.

Length: 8.50–9 inches.
Male and Female: Above clear, deep slate. Under parts lighter gray. Crown and tail black. Vent rust-red. Bill and feet black.
Song: A brilliant recitative, varied and inimitable, beginning, "Prut! Prut! coquillicot! really, really, coquillicot! Hey coquillicot! Hey! Victory!" Alarm cry, "zeay! zeay!" like a metallic mewing.

Season: Earliest date of arrival in Alberta April 11th latest date of arrival April 26th, average date of arrival May 19th.
Breeds: Through the entire summer range.

Nest: In bushes, of the type of the nests of the Thrushes, but without clay.
Eggs: 4–6, clear green-blue.

Range: Manitoba, Saskatchewan and Alberta and northward to the Saskatchewan valley.

Although the Catbird is one of our best singers it is somewhat difficult at times to locate him as he is quite shy preferring the low brushy places to those that are more open, Some authorities state that he prefers the deep woods to the semi-open districts but I have found it nesting in all sorts of places from a gooseberry bush overhanging a lonely brook to a brush pile or a lonely fence corner. I have found it nesting in the deep woods only ona few occasions.

The male is a beautiful singer and undountedly a mimic, when he so desires, but he has an individual and most delightful song, filled with unexpected turns and

buoyant melody. The length of the song varies greatly, sometimes lasting uninterruptedly for an hour or more. One strain is used as an interduction and as a constant refrain, Prut! Prut! Coquillicot! The ejaculation "Prut! Prut! " turns into the shrill "Zeay! Zeay!" when he is really alarmed or angry.

His song is only second, in its colloquial variety, to that of the Brown Thrasher, and it is sometimes for a moment difficult to distinguish between the two. He is particularly successful in imitating the whistle of the Chat (itself a mimic and ventriloquist), and has several times lured me by it, through bushes and briars, only to mock at me and call, "Hey Victory," in my face.

The United States department of Agriculture state that 44% of the Catbirds food is animal (insect) and 56 per cent of vegetable food. Ants, Beetles, Catterpillars and Grasshoppers constitute three fourths of the animal food, the remainder being made up of bugs, miscellaneous insects, and spiders. One third of the vegetable food consists of cultivated fruits, or those which may be cultivated, as strawberries, raspberries etc.; but while we debit the bird with the whole of this it is probable that a large part is obtained from wild vines, the rest of the vegetable matter is mostly wild fruit. Although the Catbird sometimes does considerable harm by destroying small fruit, it cannot on the whole be considered injurious. On the contrary, if most parts of the country it does more good than harm.

BROWN THRASHER: Toxostoma rufum.

PLATE 14.

Length: 11 inches.

Male and Female: Above reddish brown, darker on wings. Beneath yellowish white, with brown, arrow-shaped spots on breast and sides. Wings with two whitish bands. Tail very long. Female paler. Bill black, lower mandible yellow at base; feet light.

Song: Bravura style, with frequent colloquial strains.

Season: Arriving first week in May.
Breeds: In the southern part of Manitoba, Saskatchewan and Alberta.

Nest: In low shrubbery or the lily leaved tree, a bulky made structure of grape-vine, bark, grasses, twigs, and rootlets. In sandy localities, generally on the ground.
Eggs: 4, green, sometimes paling to white, thickly speckled with brown.

Range: Southern part of Manitoba, Saskatchewan and Alberta.

Red Mavis

Song Thrush, Red Thrush, and Brown Mocking bird are four of the local names for this most exultant and (quanity and quality considered) dashing of our song birds. He arrives early in May and after a week or so of almost uninterupted music settles down and prepares his nest.

It is impossible to mistake the Thrasher. The brilliant rust-red which covers his entire back, his habit of twitching and thrashing his tail when feeding on the ground, and his bold, swinging flight are certain marks of identification. His song is heard early in the morning from the bushes of some pasture or thickly brushed waste, but later in the day he usually perches on the topmost twig of a tree, and with swelling breast and drooping tail pours forth his freest music; and under no circumstances does he sing when near his nest.

The song has the same colloquial quality as the Catbird's, without its extreme rapidity, and one frequently detects in it the pauses peculiar to the Wood Thrush. I have tried in vain to reduce it to syllables, and find the result is misleading; but the song is always bold and ejaculatory, as Thoreau describes it: "Upon the topmost spray of a tree sings the Brown Thrasher, or Red Mavis, as some love to call him, — all the morning glad of your society (or, rather, I should say, of your lands), that would find out another farmer's field if yours were not here. While you are planting the seed he cries, 'Drop it, drop it, — cover it up, cover it up, — pull it up, pull it up, pull it up.'"

A different mood, that of a reflective shoemaker whom Wilson Flagg knew, wove the song into other words, but with the same accented value: "Look up, look up! — Glory to God, glory to God! — Hallelujah, Amen, Videlicet!"

According the the United States Department of Agriculture 36 per cent of the Brown Thrasher's food is vegetable matter and 64 per cent animal food, practically all insects, and mostly taken in Spring before fruit was ripe. Half the insects were Beetles and the remainder chiefly grasshoppers, Catterpillars, Bugs, and Spiders. A few predacious Beetles were eaten but on the whole the work of the species as an insect destroyer may be considered benificial.

Eight per cent of its food is made up of fruits like Raspberries and Currants which are or may be cultivated, but the Raspberries at least are as likely to belong to wild as cultivated varities. Grain, made up mostly of scattered kernels of oats etc is merely a trifle, amounting to only 3 per cent. Though some of the grain may be taken from newly planted fields, it is amply paid for by the destruction of insects which are eaten at the same time.

Taken all in all, the Brown Thrasher is a useful bird, and probably does as good work in its secluded retreats as it would about the garden, for the swamps and groves are no doubt the breeding grounds of many insects that migrate there to attack the crop of the farmer.

WESTERN HOUSE WREN: Troglodytes aedon parkmani.

PLATE 15. FIG. 1.

Length: 4.50–5.25 inches.

Male and Female: Dark brown above, minutely barred with blackish. Under parts gray with brownish wash and faint bandings. Fairly long tail. Bill black above, lower mandible light; feet brown.

Song: A merry roulade, sudden, abruptly ended and frequently repeated.

Season: Earliest date of arrival in Alberta May 6th latest date May 26th, ten year average May 19th. will appear a few days earlier in Manitoba and Saskatchewan.

Breeds Locally throughout its range. frequently rearing two ~~broods~~ sometimes three broods during a season.

Nest: A loose heap of sticks with a soft lining, in holes, boxes, etc.
Eggs: 6 to, cream-colour, so thickly spotted with brown that the whole egg is tinged.

Range: Manitoba, Saskatchewan and Alberta northward. According to Mr. Preble this specie is a regular breeder on the Athabaska and lower Peace.and has been seen once on the upper MacKenzie

The House Wren is a bird who has allowed the word *male* to be obliterated from its *social* constitution at least. We always speak of Jenny Wren; always refer to the Wren as *she*, as we do of a ship. It is Johnny Wren who sings and disports himself generally, but it is Jenny, who, by dint of much fussing and scolding, keeps herself well to the front. She chooses the building-site and settles all the little domestic details. If Johnny does not like her choice, he may go away and stay away; she will remain where she has taken up her abode and make a second matrimonial venture. In fact, a little exhibition of independence of this kind took place in our barnyard last spring.

Jenny makes herself as much at home about the wood-shed and outhouses as the mouse does in the granary, and when she slips in and out of the woodpile she seems like a mouse masquerading in feathers. Raise her suspicions or her anger, however, and there is no mouse-like meekness about her; she becomes a tiny shrew, almost thrusting her bill in your face as she pierces your ears with her persistent, "Chit-chit-chit-chit!"

Forgive her for this; it is merely a bad habit, not really an attack, and even while she scolds, her mate is off perching on the pointed top of the clothes-post, head raised high as if he would allow no unnecessary curve in his neck to impede his outburst of sparkling song. "Foive notes to waunst," was the Irish labourer's comment upon this song. "Foive notes to waunst," it is, and I defy any one to render this *appoggiatura* into intelligible syllables.

The Wrens are a most particular bird about the care of their nest, and, though inhabiting pent-up places, their homes are singularly free from vermin. Its industry is very great in collecting the insects upon which it feeds, both itself and the young, and oftentimes it seizes small butterflies when on the wing. [illegible]

eye. Neck
s and tail
with pale

These birds are entirely insectivorous and are a great benifit to the Farmer and Fruit Grower. I have noticed them carrying ten worms to their young in seven minutes and singing continously. The Wren nests in this locality usually in an excavation left by a woodpecker in a natural tree cavity or a bird box erected for the purpose.

WINTER WREN: Nannus hiemalis hiemalis.

Length: 3.90–4.10 inches.
Male and Female: Colour very similar to House Wren, but the under parts rusty, dimly and finely barred with dark. Tail and bill short, the latter dark, and slender; feet dark.
Song: Strong, and very musical; not often heard here. Call note, "tr-r-r-r-r-r."

Season: Average date of arrival in Alberta May 15th Manitoba and Saskatchewan a few days earlier.
Breeds: In the wooded portions of Manitoba, Alberta and Saskatchewan northward.

Nest: In odd nooks, crevices, logs, etc. Of twigs mixed with moss, hair, and feathers.

Eggs: 5–8, pure white, finely dotted with purple and brown.

Range: Manitoba, Saskatchewan and Alberta northward, according to Mr. Macoun it is common in the thick Spruce woods from Lesser Slave Lake to Peace River Landing.

The Winter wren is more common than it appears to be, for it is most retiring and shy of its family.

Though it will sometimes nest near dwellings, it prefers seclusion, and especially proximity to running water. Mr. Otto Boehr writing of the breeding habits of this Wren states "We found his nest but once, it was built on the side of a mossy log that laid across a small run

in a dark rocky place. The nest was composed entirely of moss, with the entrance at one side near the bottom; it contained six eggs which resembled those of the Chickadee."

Burroughs considers that its song is surpassed by very few, being of a gushing, lyrical character, uniting brilliancy and plaintiveness.

Short-billed Marsh Wren: ***Cistothorus stellaris.***

Length: 4.50 inches.

Male and Female: Above brown. Crown and part of back streaked with black and white. Wings and tail barred. White line over eye. White beneath, washed with rusty across breast and along sides. Very short bill, dark above, light below; feet brown.

Song: "Che, 'chet, de-de-de-de-de!"

Season: Early May to late September.

Breeds: Throughout its entire summer range.

Nest: Among the grasses of marshy meadows; it is made of grass and always softly lined; closed over the top, with the entrance at one side. It may be either suspended between rushes, or be placed on the ground in a tussock, away from the water.

Eggs: 6-9, pure white.

Range: Through Manitoba and according to Mr. Spreadborough has been observed as far west as Indian Head Saskatchewan.

The Short-billed Marsh Wren is a bird of moist meadows and reedy places. As a summer visitor it is erratic and

irregular, being locally fairly plentiful during one season, and the next rare, but abundant in some adjoining place. It is very adroit in eluding the curious, by disappearing in the long grass, and not emerging until it is a long distance away, very much as many of the Ducks escape notice by diving, and swimming under water.

This bird, as well as the next species, has a peculiar habit of building several nests every season. Samuels relates that these are built, it is believed, to secure protection for the female; so that when people search for the nest near where she is sitting, the male will lure the hunter to an empty nest. Its haunts, in this vicinity, are similar to those chosen by the Red-winged Blackbird.

PIPIT: Anthus rubescens.

Length: 6.25-6.75 inches.
Male and Female: Above dark olive-brown. Tail and wings brown-black, the tail shorter than the wings, several outer tail feathers partly or wholly white. White eye ring and line over eye. Underneath whitish with washes of various shades of brown. Bill dark; feet brown.
Song: A hesitating querulous note.

Season: M Average date of arrival in Alberta April 15th. Manitoba and Saskatchewan a few days earlier.

Breeds: Only in high latitudes, sub-Arctic regions, and in Rocky Mountains, etc.
Nest: Close to ground, of grass, moss, or lichens.
Eggs: 4-6, chocolate-colour, marked and scratched with black.

Range: Seen in Manitoba, Saskatchewan and Alberta only during the Spring and Fall migrations.

The ~~Pipit~~ may be recognized by its very uncertain, wavering flight, seldom remaining long in one spot, but moving on and hovering and wheeling about the place where it intends next to alight. I have seen them frequently in the fields, on late October mornings when everything was white with hoar frost and they were gleaning a breakfast, uttering their thin notes and scattering irregularly, only to gather immediately on some convenient fence-

rail, or telegraph wire. They also flock in the autumn-ploughed fields, searching out the newly uncovered grubs and larvæ. When on the ground they resemble the Water Thrushes and they are continually jerking their tails about, a habit which has given them, together with these Thrushes, the title of *Wagtails.*

Black and White Warbler: *Mniotilta varia.*

Plate Bc. Fig. 1.

Length: About 5 inches.

Male and Female: Above striped black and white. White stripe on top of head, bordered by black stripe. White stripe over eye. Black cheeks and throat, separated by a black line. Breast white in middle, black stripe on sides. Wings and tail black; wings with two white cross-bars and some white edgings, tail with white markings on outer quills. Bill and feet black. Female paler stripings, less distinct. *Strong resemblance to the Downy Woodpecker.*

Song: Feeble and lisping, "Weachy, weachy, weachy, 'twee—'twee, 'twee 'tweet."

Season: Average date of arrival June 1st.
Breeds: Throughout the summer range.

Nest: Low down, either on a stump or the ground, composed of bark, grass, leaves, hair. Very difficult to find.

Eggs: 4-5, white, dotted thickly with red and brown.

Range: Manitoba, Saskatchewan and Alberta northward. And According to Mr. Preble as far northward as Ft. ~~XXX~~ McMurray and Ft. Simpson.

The Black and White Warbler is one of the most familiar and sociable of the Warblers. At first you will doubtless think it a small Woodpecker, as it is seen principally scrambling around tree trunks searching for the insect food upon which it, together with the entire family of Warblers, subsists.

The Creeper, when at rest, is not at all graceful, but it is most interesting to watch its zig-zag course from the tree trunk out to the angles of the crooked branches, picking up insects which are invisible to us, with its slender, sharp bill. In watching the manœuvres of all bark-feeding birds, you must keep in mind that the eyes of birds are powerful magnifiers, and that to them objects appear twenty-five times as large as they do to us.

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It is a very regular migrant arriving the first week in June in full song, in its habits this bird is more of a creeper than a warbler. It is an expert climber and rarely, if ever, perches on the branches of a tree or shrub. In the manner of the smaller Woodpeckers, the Creepers, Nuthatches, and Titmice it moves rapidly around the trunks and larger limbs of trees of the forest in serch of small insects and their larvæ. It is very graceful and rapid in its movements, and is often so intent upon its hunt as to be unmindful of the near presence of man.

It is found chiefly in thickets, where its food is mostly easily obtained, and has been known to breed in the immediate vicinity of a dwelling.

The song of this Warbler is sweet and pleasing. It begins to sing from its first appearance in June and continues to repeat its breef refrain at intervals almost until its departure in September. At first it is a monotonous ditty, says Nuttall, uttered in a strong but shrill and filing tone. These notes,as the season advances, become more melow and warbling.

They build on the ground. One nest being found on the surface of a shelving rock. It was made of corse strips of bark, soft decayed leaves, and dry grasses, and lined wit a thin layer of black hair. The parents fed their young inthe presence of the observer, with affectionate attention, and showed no uneasiness, creeping head downward about the trunk of neighboring trees, and carrying large smooth caterpillars to their young.

Warblers are entirely insectiverous and probably rear their young on a purely animal diet.

...y serch the crevices in the bark of the tree trunks and branches look among the undergrowth and hunting along the fences for bunches of eggs, the buried larvæ of the insects, which when undisturbed, hatch out millions of creeping, crawling, and flying things that devistate garden and orchard and every crop of the field.

TENNESSEE WARBLER: Vermivora peregrina.

Length: 5 inches.
Male: Crown and nape grayish blue the former rarely with traces of Chestnut, a whitish line above the eye and, usually, a dusky line through it; tailm edged with Olive-Green the two outer feathers usually with more or less dull white at the end of the inner vein; secondaries edged with Olive-green **********. Under parts grayish white, the breast often tinged with buff or yellowish, the sides with greenish(xxxxxxx)
Female: Similar to adult male, in spring, but crown washed with olive-green, under parts more yellowish.(Chapman)
Song: Chee,chee,chee-Chu, chu, chu, chu, chu, chu, chu.
Season: Average date of arrival in Alberta May 24th earliest date of arrival May 20th, latest date May 28, Manitoba and Saskatchewan a few days earlier.
Breeds: Throughout the entire summer range.
Nest: "The nest is small and loosely constructed, being quite flat. It is composed outwardly of a few leaves, a little moss, and a good deal of fine grass, lined only with the latter material."(Norris)
Eggs: Four or five, white or creamy white spotted about the larger end with burnt umber or lavender.
Range: Manitoba, Saskatchewan and Alberta northward to Great Slave Lake and the Upper Mackenzie.

The Tennessee Warbler in certain localities is quite common in the wooded portions of its range. The male when singing is usually perched high up in some tree, where it utters its weak song which resembles Chee,chee,chee-Chu,Chu,

chu,chu,chu,chu,chu. This is in two parts, the Chu's representing the first and shorter portion while the Chu's represent the latter part, and have a tendency to grow more rapid as it nears the end, but with no percipitable rise of the voice. This song very much resembles the song of Grinnell's Water Thrush but is uttered with considerable less volume. I listened to them singing alternately the greater part of one forenoon.

YELLOW WARBLER: Dendroica æ stiva æ stiva.

PLATE 10. FIG. 1.

Length: 4.75–5 inches.

Male and Female: *Above rich olive-yellow, brightening on the rump; breast and under parts golden-yellow.* Breast streaked with cinnamon-brown. Wings and tail olive-brown edged with yellow. Bill lead-coloured; feet light brown. Female darker with streaks on breast faintly marked or absent.

Song: Rapid warble, "Sweet-sweet-sweet-sweet-sweet-sweeter-sweeter?" Seven times repeated.

Season: Average date of arrival in Alberta May 19th, earliest date of arrival May 12th, latest date of arrival May 26th, Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout the summer range.

Nest: In the crotch of some terminal branch of a fruit tree, or stout shrub, made of the frayings of milkweed stalks lined with fern wool and hair.

Eggs: 4–5, greenish or grayish white, spotted and blotched with lilac tints and red-browns.

Range: Manitoba, Saskatchewan and Alberta north to the limit of trees.

They come like whirling leaves, half autumn yellow, half

green of spring, the colours blending as in the outer petals of grass-grown daffodils. Lovable, cheerful little spirits, darting about the trees, exclaiming at each morsel that they glean. Carrying sun glints on their backs wherever they go, they should make the gloomiest misanthrope feel the

season's charm. They are so sociable and confiding, feeling as much at home in the trees by the house as in seclusion.

This bird is one of the particular victims which the Cowbird (see page 167) selects to foster its random eggs, but the Warbler puts its intelligence effectively to work, and builds a floor over the unwelcome egg, and repeating the expedient, if the Cowbird continues her mischief, until sometimes a three-story nest is achieved. In spite of the Warbler's seeming preference for man's society, it builds also in lonely fields and byways. The most beautiful nest that I have found, and which is now before me, was set in the crotch of an old elder bush, about six feet from the ground, by the side of the marsh lane. The outside is composed of glistening milkweed flax, which forms a felt-like case, and likewise lashes the nest to its support. The interior, to the depth of an inch, is made of the wool from the stems of young ferns, matted into a material resembling soft sponge; and inside this, to give shape and stability, are woven a few horsehairs. The Yellow Warbler sings from its arrival until July, but has no second song period.

"Small and delicate as these birds are they have been on a long juurney to the southward to spend the Winter, and now by the middle of May they have returned to their old home to find the land at its fairest-all blossems, buds, bonny air, sunshine, and melody. As they flitted about in their restless way, they sang the soft, low, warbling trills which gave them their namex of Yellow Warbler".

This is one of the most common of our warblers and will be found nesting among the willows, popular and alders that line most of the stseams, and also back in the semi-wooded portions away from the water. The nests are not usually located at any great height from the groung although I have seen them up as high as forty feet, other times I have found them within a few inches from the ground. The nest is a very compact little structure fastened securely to the branches upon which it rests. It very much resembles the nests of the American Redstart and the Least Frycatcher. Two broods are usually raised in a season inthis locatily.

The song at times seems to be Sweet, sweet, sweet, and at other times Sweet, sweet, sweeter, or Sweet, sweet, sweetie. When one is quite close to the bird the song seems to be very forcible and highly pitched but when some distance away it is very pleasing to the ear.

CONNECTICUT WARBLER: Oporonis agilis.

Length: 5.50 inches.
Male: The adult male is to be confused only with the adult male of the Mourning and MacGillivray warblers and may be distinguished from each by the complete white eye ring and its larger size and absence of black on the breast.
Female: Under part Olive-green with a brownish tinge crown grayish, wings and tail black with no white markings complete white eye ring under parts yellow, sides Olive-green.
Song: A sweet prolonged song, at times not unlike that of the Red-Eyed Vireo but considerably weaker in volume.
Season: Average date of arrival in Alberta May 25th, earliest date of arrival May 21st, latest date of arrival June 2nd. arriving in Manitoba and Saskatchewan a few days earlier.
Breeds; Throughout the entire summer range.
Nest: Composed of grasses and located on or near the ground.
Eggs: 4 or 5. Creamy white marked with a few spots of Lilac brown, black, or purple, usually formed in a ring about the larger end.
Range: Wooded portions of Manitoba, Saskatchewan and Alberta northward at least as far as the north branch of the Saskatchewan River.

I first observed the Connecticut Warbler on June 2nd 1913 about fifty miles northwest of Edmonton in a thicket of deciduous trees containing considerable underbrush, I was first attracted by a peculiar song, and after listening to it for some time decided it was a visitor which I had never chanced to meet before. I finally identified it definately and since seen it quite often, in fact, it is

at present nearly as common as any of the other warblers nesting in the low places in the immediate vicinity of swamps.

This species is recorded as breeding in Manitoba and near Carberry in southern Alberta, no record is at hand showing that they breed in Saskatchewan although it is reasonable to suppose that they do.

Myrtle Warbler: ***Dendroica coronata.***

~~Yellow-rumped Warbler.~~

PLATE 16. FIG. 2.

Length: 5.50 inches.

Male: Slate colour, striped and streaked with black. *Crown, sides of breast, and rump yellow.* Below whitish; upper breast black. Two white cross-bars on wings; tail with white spots. *In winter,* brownish olive; yellow of rump constant, but lacking on crown and breast. Bill and feet black.

Female: Resembling the *winter* male.

Song: A few notes only — "Twhip-twéeter-twéeter."

Season: Average date of arrival in Alberta May 14th, earliest date of arrival May 12th, latest date of arrival May 19th, Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Through the entire summer range.

Nest: In low shrubs, particularly evergreens.

Eggs: 4–6, the usual Warbler variety.

Range: Manitoba, Saskatchewan and Alberta north to the limit of trees.

The Myrtle Warbler is a bird of the deeper woods often preferring this locality to that which is less open, but in the Autumn it seems to prefer the more bushy growths, where it may be seen feeding on berries as well as on insect diet. The adult female Myrtle Warbler is similar to the male but much palerin color. The upper parts are strongly washed with umber and the lower parts are more or less confused with a pale wash of the same tinge. The young have no yellow except sometimes on the rump. The whole plummage is thickly streaked above and below with dusky and grayish white.

The Myrtle Warbler is quite shy and sometimes it is with great difficulty that one may approach them close enough for identification unless you have a pair of field or opera glasses.

The eggs are from four to six in number white or cream white, spotted and blotched with endless shades of umber and brown to blackish and pale lilac: and in form they are rounded oval.

In winter it forsakes its usual insect diet for such berries as it can find. Dr. Warren says that in Pennsylvania the berries of the poison-sumach (*Rhus venenata*) are a favourite article of its food, during the early winter, and these Warblers congregate in considerable numbers where the bush is abundant.

MAGNOLIA WARBLER: Dendroica magnolia.

Length: 4.75–5 inches.

Male and Female: Above, back dark olive, crown a bluish ash, bor-

dered by white lines, and these framed in black, extending across forehead and sides of head. Wings dark, bars white, and small spots of white on tail. *Rump and under parts rich yellow*, the latter streaked with black across the breast and along the sides. Bill and feet dark.

Song: Not particularly distinguishable.

Season: Earliest date of arrival May 30th, latest date of arrival June 15th, average date of arrival June 8th. Manitoba and Saskatchewan should be a few days earlier.

Breeds: Through the summer range.

Nest & Eggs: Eggs 4 to 6 in number brown color dull creamy white spotted and blotched with many shades of reddish brown and chestnut. The nest is usually placed in a small coniferous tree at almost any elevation and is usually composed of rootlets and grass stems and usually lines with hair

Range: Manitoba, Saskatchewan and Alberta north to the Great Slave Lake and Upper Mackenzie.

The Magnolia Warbler is one of the most gaily dressed of all his dainty family, and is quite easily identified by his distinct markings.

Its favorite resorts are little clumps of fur and sp spruce schrubs, as well as willow thickets near streams and ponds and other damp places. "Its gay colors and sprighty song will at once attract the attention of even the casual observer. The nest is usually placed in the horizontal twigs of the fir or spruce at heights ranging from four to six feet, five being the average elevation, and the favorite localities are the edges of wood pathes, clearings, or roads bordered by woods. Sometimes the nests are built in the tops of young hemlocks ten or fifteen up or in the forest thirty five feet above the ground." Mr. Brewster describes the nests as loosely put together, of fihe twigs, preferably hemlock, course grasses and dry weed stocks. The lining is fine black roots closely resembling horse hair. The eggs are four, very rarely five, of creamy white, spotted and blotched with variousshades of reddish brown, hazel and chestnut. The markings are generally large and well defined and often form wreathes about the larger end.

Mr. Ridgeway mentions the Magnolia warbler as being one of the most agile of its tribe, its quick and restless movements being more like those of the Redstart than those of its nearest kindred. The tail is carried somewhat elevated and somewhat expanded, to display the broad white band across the middle portion of the inner web of the feathers, which together with the bold contrasts of black, yellow, and blue-gray of the plumage, render it both conspicuous and beautiful.

Chestnut-sided Warbler: ***Dendroica pensylvanica.***

Length: About 5 inches.

Male and Female: Top of head yellow. Black stripe running through the eye, and a black spot in front of it. Back and wing coverts streaked black and yellow. Throat and breast white, with

chestnut stripe starting at the black mustache and extending down the sides. Belly black; feet brown. Female less highly coloured.

Song: "Twit-a-wit-a-wit-~~xxxxx~~ a-wit-wee-chew"

Season: The average date of Spring arrival in Manitoba about May 21st.

Breeds: Breeds through its range in Manitoba and probably in eastern Saskatchewan.

~~Xxxx~~

Nest: In bushes and low trees; when in the latter a forking branch is chosen. Nest on general plan of the Yellow Warbler's, but coarser and less woolly.

Eggs: Some simply speckled; others prettily chained with chestnut.

Range: Manitoba and Eastern Saskatchewan northward.

Warblers as a general rule are on a decrease on account of the destruction of the forests, but the chestnut-sided Warbler which was considered by the early ornithologists to be quite rare, now appear to be fairly abundant. Probably this change in numbers is due somewhat to development of the second growths in which the warblers are usually found.

The Chestnut-sided warbler is usually found on or near the ground ~~or~~ ranging to the top of the smaller decidious trees.

Mr. Lynds Jones states that the nests of the Chestnut-sided warbler resembles that of the Yellow Warbler both in situation and composition. It is usually placed in the fork of a bush or shrub from two to eight or nine feet from the ground, made of the fibrous bark of the milk weed, or someother hempen material, grass and sometimes leaves lined with some sort of plant down and long hair. The bark fibers are wound about the bush twigs, securely lashing the nest into the crotch. The four or five eggs are of a creamy white color, with a wreath of reddish and dark brown spots and dots around the larger end, the spots becoming smaller and less numerous both ways from this wreath.

Black-poll Warbler: *Dendroica striata.*

Length: About 5.50 inches.

Male: Black cap, grayish white cheeks, general upper parts striped gray, black, and olive. Breast white, with black streaks. White spots on outer tail feathers; upper mandible brownish black, lower yellowish; feet flesh-coloured.

Female. Crown and back, olive-green, faintly streaked with black. Paler than male all through.

Song. Call note, "Screep, screep." Torrey says that, short as the song is, it contains a perfect crescendo and a perfect decrescendo.

Season: Earliest date of arrival in Alberta May 20th, latest date of arrival June 9th, average date of arrival June 5th.

Breeds: Throughout its entire summer range.

Nest: In evergreens. Nest large for the size of the bird, as Mr. Brewster notes several nests 5 inches across and 8 inches deep. They are made of terminal shoots of conifers, lichens, rootlets, and sedges, lined with grass panicles.

Eggs: Not especially marked.

Range: Rare in Manitoba becoming common in Saskatchewan and Alberta occurring northward according to Mr. Preble to the very edge of the wooded country.

The jolly Black-poll has all the vivacity and activity of a Flycatcher, and, in fact, Dr. Coues gives it credit for many of the Flycatcher's attributes, and says that it catches insects on the wing with the same ease as the Wood Pewee.

Some authorities say that the Black-poll climbs and walks about the trees in the manner of the Black and White Warbler. I do not think that it does this; for I watched a number of them at short range last spring, and while the birds *seemed* to *creep*, they really *flew* about by means of a short and rapid flip of the wings.

Black-polls are at home not only in the woods but also in the tops of the tallest trees, they prefer

those forests that border on water courses or swamps where, flying from branch to branch they quickly catch the winged insects with a snap of their bills not unlike that of the flycatchers. Like the flycatchers, too, the color of their plumage is beautifully adapted to obscuring them in their dark green folage retreats.

Standing on the very tip of some evergreen tree, the chaste little figure striped in half mourning and capped in jet black, will burst out in a happy song and then quickly fly into the dark recesses of the forest. The female shows a strong attachment for her nest and exhibits great anxiety on the approach of any being, beating her wings along the branches in the utmost distress, or one may still hear her sharp chipping note of alarm as she dissapears in the almost inpenetratable growth of small black spruce.

Male and Female: Chestnut crown, brownish, verging on olive abo[ve]
With some dow[n]

Black-throated Green Warbler: *Dendroica virens.*

Length: 5 inches.
Male: *Back and crown bright olive-yellow, sides and front of head clear yellow.* Entire throat and upper breast black, black continued in a stripe down the sides. Lower parts

yellowish white. Wings and tail brownish, white wing bars. Bill and feet dark.
Female: Chin yellowish, throat dusky, below pale whitish. In autumn plumage the male resembles the female.
Song: Cheerful interrogative, "Will you co-ome, will you co-ome, will you?"

Season: Common in central Alberta by May 22nd probably a little earlier in Manitoba and Saskatchewan.
Breeds: Though the summer range.

Nest: At the forking of high branches; made of twigs, bark, grasses, and lined with hair, roots, down, etc.
Eggs: 4–5, white, sprinkled and veiled with brown-purple.

Range: Manitoba Saskatchewan and Alberta and as far north as Lake Athabasca.

Though x decidedly a Forest Warbler, it favors [illegible] and semi-open lands rather than the heavy timber and is particularly partial to the dry pine woods. It is usually found between the tops of the middle sized Spruces and Pines and the bottom branches on the outer borders of the woods.

The Black throated Green is a Warbler that sings freely while he travels but of course will be at his best during the breeding season.

repeats a little phrase that separates it from the indistinct songs of so many of its tribe: "Will you co-ome, will you co-ome, will you?" it says, giving a particularly emphatic pause on the last two syllables.

Pine Warbler: ***Dendroica vigorsii.***

Length: 5.50–6 inches.

Male: *Above bright yellowish olive, clear yellow below,* dark streaks on sides. Yellow eye line; white bars on wings. White blotches on two outer tail feathers.

Female: Dull throughout, dirty white instead of yellow breast.

Song: A delicately trilled whistle. (Minot.)

Season:- Arriving about the middle of May leaving early in September.

Breeds: Probably throughout Manitoba.

Nest and Eggs: No special marks of identification.

Range:, Probably occuring throughout Maintoba but not likely to be found in Saskatchewan and Alberta.

The Pine Warbler, the largest of the tribe, shares with the Myrtle and Palm Warblers the distinction of being one of the three hardiest of the tribe. Like so many of the family, they are most frequently seen in hemlock and pine woods, and also in parks and gardens where these conifers have been planted freely. This Warbler has none of the delicacy of shape or beauty of colouring belonging to his kin. Even the male in full plumage shows few dainty variations and blendings of colour, and it has a heaviness of build that is more Finch-like.

The best way to designate its song is to say that it has some of the qualities of a Sparrow's; remembering to keep in mind (as with all Warblers) that the notes are never clear and pure as in the case of Sparrows and Thrushes, but are half whispered, as if to save the strain on the vocal chords. This Warbler combines some of the traits of a Creeper and Flycatcher. It often circles about the tree trunks like the Nuthatch or Brown Creeper, sails into the air after insects, and then descends to the ground, all in the space of a few minutes.

"While the Pine Warbler has one of the most extended breeding ranges among Warblers it is never found nesting other than in pines, and even during its migrations it is seen in other growths in-frequency."

Gerald Thayer puts it very well when he says; "Never was a bird more papely than the Pine Warbler. Except when migrating it sticks to pine woods as a cocklebur to a dog's tail. There is even a sort of gummy sluggishness about its movements as it skulks among the pitchy branches, crossing among their stems, and doing little of the agile twig-skipping characteristics of its tribe. In the breeding season, the Pine Warbler's beat lies between the middle and tops of big and medium sized pine trees; but during migrations it is extended to scrubby deciduous copses and to apple orchards."

Ovenbird; Golden-crowned Thrush: *Seiurus aurocapillus.*

PLATE 17. FIG. 1.

Length: 5.75–6.50 inches.

Male and Female: Olive-green above, white eye ring, two brown stripes on head, enclosing an orange crown. White below, with brownish spots in the centre of breast running into streaks on the sides. Brown bill, legs and feet flesh-coloured.

Song: Call note, "Teacher-teacher-teacher!" given in gradual crescendo. The love-song liquid like that of the Water Thrush, but seldom heard.

inaccessible swampy places, especially sphagnum bogs, upon

Season: Earliest date of arrival May 14th latest date of arrival May 29th, average date of arrival May 19th, Manitoba and Saskatchewan possible a few days earlier.
Breeds: Throughout its summer range.

Nest: A ball of leaves and grasses on the ground with a side opening, hence the name Ovenbird, though the nest bears a closer resemblance to the earth huts the Italian labourers build.
Eggs: 4, cream-white, specked with brown-purple.

Range: Manitoba, Alberta and Saskatchewan north at least to Great Slave Lake.

With the Ground Warblers we come again to birds with musical voices, who, even if they do wear more sober plumage, are a welcome change from the lisping prettiness of the previous groups.

If you wish to identify the Ovenbird, or Golden-crowned Thrush, as he is still called, you must trust to sound rather than sight, for you will hear far oftener than see him. On his arrival in the early part of May, he comes familiarly about the garden, sometimes in company with the Veery, and spends a week, perhaps, among the shrubs and evergreens, running out on the ground occasionally, with an alert air, as if looking for his mate.

At this time the bird appears like a small, slender Thrush, with a little golden-brown streak on the crown. Suddenly from the pines comes the half-defiant call, "*Teacher*, TEACHER, TEACHER!" each syllable accented, and rattled off with increasing volume, and you are quite incredulous that so small a bird can utter such a sound. The notes are familiar to you; you have heard them a hundred times breaking the intense noon stillness of the woods, but you had supposed that they proceeded at least from a large Woodpecker; but no, it is the Ovenbird; and this call has given him a third name, — the Accentor.

The Oven-bird is found in the deep deciduous woods with fern grown banks sloping to a stream are their favorite haunts and on these banks where the ground is covered leaves in various stages of decay, they build their hut like nests.

thus occupied, the males give, at rare intervals, an exquisite little serenade to their mates, which is wholly different from the shrill call notes. It is most likely to be heard when the bird is on the wing in the early evening, and somewhat resembles the music of the Louisiana Water-thrush. Many people who are familiar with its nest and haunts have never heard this love-song. The nest is extremely difficult to locate; settled as it is into a ground hollow and roofed over, it may be easily passed by as a bunch of huddled leaves. Sometimes you may see a bird alight on the ground and run nimbly toward such a tuft, and that will be the best method of finding the nest, which, though it is cleverly hidden, often holds the unwelcome eggs of the Cowbird. All the singing and calling is done from the trees; and, as you look up in the uncertain wood-light, the singers appear to be only dusky specks, like the few last year's leaves that still lodge there. But when the rare music is heard, the little brown mote is transfigured, and soars above the trees.

GRINNELL'S WATER-THRUSH. Seiurus noveboracensis notabilis.

Length: 6–6.25 inches.
Male and Female. Peculiarly heavy, dark bill. Above grayish brown, with a brown crown and white line over the eye. Creamy white breast, sparingly streaked with brown. Legs lightish.
Song: A thrilling warble, interspersed with flute and water notes.
Season: Summer resident, arriving the last of April.
Nest and Eggs: Like the last species, but often sunken in the ground.

Season: Earliest date of arrival May 18th, latest date of arrival May 28th, average date of arrival May 23rd.
Breeds: Through its summer range.

Range: Manitoba, Alberta and Saskatchewan northward throughout the Athabasca-Mackenzie Region and northward nearly to the limit of trees.

The Grinnell's Water Thrush is very shy and very difficult to get acquanted with. Mr. Chapmans discription of the Louisana Water Thrush the eastern form of this specie does very well also for the Grinnell Water Thrush." "This shy, elusive creature seems to be more like some

untamable spirit of the woods than a bird. Cautiously we may follow his sharp, decisive call or wild, ringing, almost startling song, through the luxuriant undergrowth only to hear them repeated from some point far ahead or even behind us; and, if by good fortune, we should get a glimpse of his nervously teetered body, before we have time for one satisfactor look he is off- not to the cover of the near by bushes, but on a low darting flight that takes him speedily out of sight."

The song of the Grinnell Water Thrust very much resembles that of the Tennessee Warbler, but is sung with considerable more volume. The nest is usually made quite bulky filling the cavity in which it is placed and is very largely composed of course grasses and rootlets lined with finer grasses and bits of moss.

...sunken in the ground.

MOURNING WARBLER. Oporornis philadelphia.

Length: 5.25–5.50 inches.

Male: Decidedly marked *gray head* and *neck*, the feathers having black edges that give them a crape-like quality; the rest of upper parts yellowish olive. Throat and upper breast usually black, veiled with some ash-gray feathers. *Rich yellow lower breast and belly.* Wings and tail glossy olive-green. Upper mandible dark, lower mandible and feet flesh-coloured.

Song: "Let me see, let me see, let me see, do!"

ing is done ...

Season: Arriving the later part of May.
Breeds: Throughout the summer range.

Nest and Eggs: Like those of the Maryland Yellow-throat.

Range: Manitoba, Saskatchewan and Alberta and northward according to Mr. Preble to Ft. McMurray.

The Mourning Warbler is not so numerous in this locality as the Connecticut Warbler and is very apt to be confused with it as also with the MacGillivray Warbler.

Dr. Coues refers to it as resembling in its appearance and behaviour a gay and agreeable widow, who is conscious that her weeds are becom-

ing. Its general habits, like its song, somewhat resemble those of the Maryland Yellow-throat, but though a Ground Warbler, nesting and spending much time in the bushes and tangles, it does its most vigorous singing in the tree-tops of woods where the underbrush has been left undisturbed.

Burroughs says: "The Ground Warblers all have one notable feature,—very beautiful legs, as white and delicate as if they had always worn silk stockings and satin slippers. High Tree Warblers have dark brown or black legs and more brilliant plumage, but less musical ability."

MACGILLIVRAY WARBLER: Oporornis tolmiei.

Length: 5:40 inches.
XXXXXXXXXXXXXX:
Male: Head bluish slate, back olive green, wings and tail olive green without white markings; a white mark above and another below the eye, lowers black; throat and upper breast blackish rather evenly and widly tipped with grayish white, rest of under part is yellow, the sides greenish. (Chapman)
Female: Similar to adult male in spring but crown tipped with brownish, throat more widely tipped with grayish, (Chapman)
Song: Chee-chee-chee uttered in quick succession.
Season: Average date of arrivalm in Alberta June 2nd.
Breeds: Throughout its entire summer range.
Nestx: The nest is usually placed in briers, small bushes, or even in a tangle of vines or brush, usually from six inches to two feet from the ground, composed of grasses rootlets etc. and lined with finer grasses or hair.
Eggs: three to five, usually four, ground color xx white to slightly creamy marked with xxxxxxxxxxxxxxxxxxxx many shades of brown and lilac. These markings appear in the form of specks, blothhes and spots sometimes running together.
Range: The western part of Saskatchewan, Alberta and northward according to Spreadborough as far northxas Lesser Slave Lake and Peace River Landing.

This warbler is [illegible] in favourable localities throughout Alberta especially in the wooded and semi-wooded portions. It seems to favor the localities which are not too heavily timbered and where there is a great quanity of briers or deciduous growth from two to six feet in height.

A few years ago one nested in the edge of my garden building its nest under a brush pile in the fork of a stick within a few inches of the ground. Their call notes of Chee-chee-chee is heard through the greater part of the day, they are also very good singers, the male singing almost continually while the female is attending to the nesting duties.

It is a very easy matter to confuse this species with the Mourning or Conneticut Warbler, the chief distinction being the markings about the eyes.

WESTERN YELLOW-THROAT. Geothlypis trichas occidentalis.

PLATE [illegible]

Length: 5–5.50 inches.

Male: Above grayish olive on head, clearing to bright olive on rump. *Under parts, under wing and tail coverts, beautiful yellow,* grading to white in middle of belly. *Forehead and sides of*

head masked with black, separated by ash-white line from crown. Black bill; flesh-coloured feet.

Female: Smaller, and colours less distinct; *mask wanting,* as it is also in the young.

Song: "Follow me, follow me, follow me!"

Season: From May to September. Common summer resident.

Season: Earliest date of arrival May 27th, latest date of arrival June 8th, average date of arrival June 2nd.
XXXXXX: Manitoba and Saskatchewan a few days earlier.
Breeds: Through the entire summer range.

Nest: Large and deep, sometimes partly roofed over; made of broad grasses, either on ground or in bushy tangles.

Eggs: 4–6, white, sparsely sprinkled with brown.

Range: Manitoba, Saskatchewan and Alberta northward to the Peace River Valley.

Next to the Yellow-Wood Warbler, this Ground Warbler is the best known and merriest of the entire clan, and easily identified by his mask, yellow throat, and distinctive song.

Early in May you will see a flash of yellow among the white flowers of the dogwood (*Cornus florida*), or quivering in the willows, and a bright eye peers through the black mask and a sweet, persuasive voice calls, "Follow me, follow me, follów!" If you wisely accept the invitation, you will become so well acquainted with all of his little innocent airs and graces that before the summer has passed you will recognize his plainer, maskless mate, and perhaps note the plumage development of the young.

In following this Merry Andrew across some old pasture or along a thickly shrubbed fence, you will also discover his nest. The nest that I have now before me was found not far below the garden wall, in an old meadow, where a tangle follows the watercourse, and was lodged between tall weeds and grasses at a little distance from the ground. It is of a long cup-shape, the form of the little baskets in which strawberries used to be sold, and which were called *pottles*. It is quite bulky, made of wide grass-blades and leaves, and very thick at the bottom, the nest being shallow in the interior and lined with vanilla grass. This nest is not roofed over, but shows a tendency to it by being higher and slightly curved on one side, as if the bird had intended to form a roof and then changed its mind.

"The yellow throat for a Warbler, is possessed of unusual individuality" says Mr. Chapman "This is due not only to its mode of live and its pecular markings, but particularly to its responsiveness. The three-top Warblers pass us by without so much as a chirp of recognization, but the Yellow-throat is evidently interested in us; his notes are intercepting and so clearly occasioned by our presence that they seem to be actually addressed to us. With nervous animation the bird hops here and there, appearing and disappearing, its bright eyes shining through its black mask, its personality so distinct, that one is tempted to believe it a feather clad sprite of the bushes. The bird, however, is far from being confined to bushy tracts, wet or dry, in the woods or out, but is distinct partial to cat-tail meadows a trait far more pronounced in its western relatives.)

"It is difficult to believe that this haunter of thickets mounts high in the sky to persue its air-line flight to or from its summer home, but the larger number of Yellow-throats included among the victims of light houses show that, like other retiring birds it is a night migrant."

WILSON'S WARBLER. Wilsonia pusilla pusilla.

Black-capped Warbler.

Length: 4.75 inches.

Male and Female: Black cap. Above olive-yellow, olive-yellow edgings to wings and tail. Under parts rich yellow, shades to olive on sides. Line over eye and forehead deep yellow. Bill dark above lower mandible and feet light. Female without the black cap.

Song: An indistinct warble.

Season: Occurring throughout its range the latter part of May.

Breeds: Throughout its summer range.

Nest: On the ground.

Eggs: 4–5, white, heavily spotted and sprinkled with mauve and lilac.

Range: Manitoba, Saskatchewan and Alberta northward according to Mr. Preble throughout the Athabasca-MacKenzie region in summer.

"In action, call-note and song, this is a decidedly individual little bird." Says Mr. Chapman. "Like the Canada, it is both a gleaner and a daring fly catcher, but it has a more perky restlessness of manner than the Canada. It twitches its tail up and down, not methodically and almost uninteruptedly, like the Palm Warbler but with spasmodic irregularity. Now the tail will go sharply flip-flip-flipperty for some seconds together, and again it will be perfectly still for a longer time. Add to this Warbler's individual manners and sufficiently peculiar notes, his very rich yellow and yellow-green coloration,

more visibly abundant during the [illegible]

relieved by a round glossy, blue-black crown-spot (Of [illegible] feathers) as the sole marking, and you have a bird easily identified. The females usually and the young always lack the distinguishing crown-cap; but the [illegible] them.

The nest is usually sunken in the ground composed of fine dry grasses and lined with hairs and the eggs are usually four with a pure white ground color speckled and flashed with light brown.

M

CANADIAN WARBLER. Wilsonia canadensis

Length: 5.25–5.50 inches.
Male: Above ash-blue, crown spotted with arrow-shaped, black marks blending on the brow. *Below pure yellow, with a showy necklace of black longitudinal bars across the breast.* Yellow line over eye, black patch under it. Bill dark, feet flesh-coloured.
Female: Paler all through, and the black obscured.
Song: "A fine sibilant chirp, reminding one of a canary's song, but broken and incomplete." (Nehrling.)

Season: Arriving thoughout its summer range the latter part of May.
Breeds: Throughout its entire summer range.

Nest: Of dry grass and leaves on the ground.
Egg. : 4–5, white, with irregular small blotches of reddish brown.

Range: This species according to Mr. Seator occurxx throughout the wooded hill sides in Manitoba and according to Mr. Preble is now ascertained to be a regular inhabitant of the lower Athabasca Valley north at least to the mouth of the Clearwater.

The Canadian Warbler may be identified by the beautifully wrought jet necklace which he wears across his yellow throat, the black crown streaks, and the peculiar bluish ash back. He has charming manners, and a dainty way of giving a little old-fashioned bob courtesy whenever he sees a passer-by. His song is quite pretty, but not by any means

a certain mark of identification; in fact, I do not think that there are more than eight or ten of the whole Warbler tribe whose notes will serve as a guide to any one but an ornithologist well up in field practice.

"The Canada's ~~xxxx~~ commonest summer call-note is fairly characteristic having a certain pecular little 'tang' and hardhness. It sounds a little like the chack of the Yellow-throat, but is less pronouncedly different from the common run of Warblers 'chips'. The bird has also several slight and distinctive calls."

No record is at hand regarding the breeding of this species in Saskatchewan although it probably breeds there.

"The Canadian is a sprity, wide-awake, fly-snapping, Warbler vivid in movement and in song; clearly marked and brightly colored. In action it is like the Wilson's, a sort of mongrel between a Warbler, an American Redstart, and a true Flycatcher. It darts after flying insects like one of the Tyrannidæ, and its bill may sometimes be heard to click when it seizes something; it has much of the Redstart's insistent nervousness of motion, but is a less airy flitter and finally, it glides and gleams among leaves and twigs like a true Gleaning Warbler"(Thayer)

American Redstart: ***Setophaga ruticilla.***

PLATE 20.

Length: 5–5.50 inches.

Male: Above brilliant blue-black, white belly, *sides of body and wing linings salmon-orange*, which colour sometimes flushes the breast. Some orange on base of wings; tail feathers half orange and half black. Bill and feet black.

Female: Brownish olive above and the orange of the male replaced by yellow.

Song: Resembling that of the Yellow Warbler, "Sweet, Sweet, Sweeter!" but the word is only used three times, while it is repeated seven times by the Warbler.

Season: May to September; a common summer resident.

Season: Earliest date of arrival May 15th, latest date of arrival May 30th, average date of arrival May 21st.
Breeds: Throughout its entire summer range.

Nest: A carefully made structure of moss fibres and sometimes horse-hair, set in a forked branch usually about twenty feet from the ground; I have seen one at the top of a small spruce.

Eggs: Indistinguishable from other Warblers.

Range: A common summer resident throughout the wooded and semi-wooded portions of Manitoba, Saskatchewan and Alberta and northward to the Athabasca MacKenzie Valley.

Again the colour title of a bird is a misnomer. Redstart, a corruption of the German *roth stert*, red tail, being very misleading in this day of accurate colour distinctions. Mrs.

Olive Thorne Miller is on the right path when she describes it as wearing the Oriole's colour combination, — except that the Redstart has a more salmonish cast.

This Warbler, when it flutters through the spruces, seems the veriest mite of creation, appearing much smaller than its measurements indicate. The female is equally charming in her brown and yellow habit, and together they are one of the most interesting couples of the bird world, as well as being capital illustrations of perpetual motion.

One of their most characteristic motions while searching for food, is to raise the wings slightly and alight on a higher branch or else one a little in the rear of the spot where they were before, as if a breeze had lifted them.

In brilliancy of flame-like colouring the Redstart only yields precedence to the Scarlet Tanager, Baltimore Oriole, and the Blackburnian Warbler, and, in contrast to the dark evergreens, it seems a wind-blown firebrand, half glowing, half charred.

"It generic name Setophaga, interpreted into plain English means a devourer of insects, and were we to select from among the large and varied assortment of birds comprising the bulk of our Warbler hosts a form most expressive of gaiety, sprightliness and in a measure, frivolity we could not go far wrong in determining upon this species so easily outclassing all others as the most brilliantly colored member of a numerously large and interesting family, the Mniotiltidæ.

I have in mind a nest of this species which I located several years ago in the deep woods which was composed entirely of down and fine feathers taken from the deserted nest of a domestic goose. It was very compactly and beautifully put together no other material being used except that above mentioned.

FAMILY VIREONIDÆ: VIREOS.

Red-eyed Vireo: *Vireo olivaceus.*

PLATE 17. FIG. 2.

Length: 5.75–6.25 inches.

Male and Female: Olive-green above, crown ash with a dark marginal line. White line over eye and a brownish stripe through it. Below whitish, shaded with greenish yellow on sides and on under tail and wing coverts. *The iris ruby-red.* Bill dusky above and light below, feet lead-coloured.

Song: Emphatic staccato and oratorical, — "You see it — you know it, — do you hear me? Do you believe it?"

Season: Earliest date of arrival May 15th, latest date of arrival May 30th, average date of arrival May 22nd in Alberta. In Manitoba and Saskatchewan this bird will probably appear a few days earlier.

Breeds: Throughout the summer range.

Nest: Cup-like, pensile in slender forked branch of maple, birch, or apple tree; made of bark fibres, cobwebs, bits of paper, scraps of hornets' nests, etc.

Eggs: 3–5, usually 4, white, with brown spots on the larger end.

Range: Manitoba, Saskatchewan and Alberta northward to the Great Slave Lake and Upper Mackenzie.

The Vireos are a very interesting family, which, though it may be somewhat overlooked in the general spring chorus, comes to the front in the latter part of May.

Vireos that inhabit New [illegible] You cannot fail to name this Vireo, for he is omnipresent; if you do not see him, you hear him; if he chances to be silent, which seldom happens, he peers at you with his sparkling, ruby eyes that look out between a white line and a brown stripe. Wilson Flagg has forever identified him with the name of the *Preacher*, in reference to his elocutionary powers. "You see it — you know it, — do you hear me? Do you believe it?" he hears the Vireo say, and if you keep these words in your mind you will recognize the bird the first time that you hear his song.

May, June, July, and August, and still this Vireo sings on; in mid-August he does not articulate as nicely perhaps, but as the month ends he has recovered his speech and delivers a farewell exhortation in September.

Four pairs nested in the garden this season, and after the young had flown the parents stayed about the same trees, singing from five in the morning on through the scorching noontime — when the locust strove in vain to drone them down — until sunset sometimes, never leaving the particular tree where they began. Not that they sit and prate in a state of idleness; — far from it, they are constantly gleaning their daily bread. This is very well for Matins and Vespers, but the noon song becomes monotonous, it is in one key, and there is such a thing even as too much good conversation. At noon in summer, silence softened by the whispering leaves is best. At such times the Vireo seems to me

like an over-active housewife, who accompanies every motion of her broom or flash of her needle with random advice, maxims, etc., having all active gifts, but lacking the grace of judicious silence.

Though the Vireo's pensile nests are usually built upon one plan, — a cup or little pocket in a branch fork, — you will never find two alike. Of half a dozen collected in the garden, one is of cobwebs, soft cedar bark, and white worsted; one of paper, fibres, and bits of hornets' nest; and a third is a perfect collection of scraps of all sorts.

y eyes that look out between a brown
stripe. Wilson Flagg has forever identified him with the
name of the *Preacher*, in reference to his elocutionary
vers. "You see it — you know it, — do you hear me?
you believe it?" he hears the Vireo say, and if you
p these words in your mind you will recognize the bird
the first time that you hear his song.
May, June, July, and August, and still this Vire

The Red-eyed is the largest of the Vireos, and may be distinguished from the Warblers, with whom you will be apt to confuse them, by its heavier build and a slight Shrike-like hook at the point of the upper mandible.

"As noxious and destructive insects constitute the Vireo's chief food he may properly be classed among the beneficiant birds. Seeking for these in his constant occupation, as he hops along a branch, now appearing in some crevis of the bark or nook among the foliage, ever uttering his pretty song during the interval between swallowing the last worm and finding the next.

"The nest of the Red-eye is built in a horizontal branch of a tree, usually in a small sapling that responds to all the caprices of the wind, thus acting as a cradle for the little ones within. The nest is cup like in shape, and always dependant from small twigs, around which its upper edges are firmly bound with a canopy of leaves overhead. It is woven of a variety of materials, fine strips of bark, fibres of vegetables, and webbs of spiders and caterpillars. It is said that two nests of the same species are rarely found alike. Some are built of paper fibres and bits of hornits' nests and another may be a perfect collection of scraps of all sorts."

The eggs are three or four in number the ground color being white or creamy white and having a few black and umber specks about the larger end.

It was in the nest of the Red-eyed Vireo that Hamilton Gibson found twisted a bit of newspaper, whose single legible sentence read "***** Have in view the will of God."

Warbling Vireo: *Vireo gilvus.*

Length: 5.50–6 inches.

Male and Female: Above pale olive-green; head and neck ash; dusky line over eye. *No bars on wings.* Below dull yellowish; whiter on throat and belly; deeper on sides.

Song: A liquid and expressive voice, but not so powerful as the Red-eyed. Wilson Flagg gives it these words: "Brig-a-dier—Brig-a-dier—Brigate!" The song lacks the jerky, colloquial style.

Season: Earliest date of arrival May 18th, latest date of arrival May 22nd, average date of arrival May 21st in Alberta. Saskatchewan and Manitoba probably a few days earlier.

Breeds: Throughout its summer range.

Nest: Similar in construction and shape to the Red-eyed, with generally a free use of moss; in trees, usually at some height from the ground.

Eggs: Slightly smaller; otherwise not to be distinguished from the last-named species.

Range: Manitoba, Saskatchewan and Alberta northward to the Peace River.

The Warbling Vireo is a common summer resident, and a constant and delightful songster, having much more music in its voice than any other member of the family. It *warbles*, as its name implies, the notes rippling easily; and an air of pleasant mystery is given to the performance by the shyness that keeps the singer in the leafiest tree-tops. Plainness is the chief characteristic of the plumage of this Vireo; it has no sharply contrasting colours, no wing bars, and a dusky line through the eye. It frequents the garden in spring and at midsummer, but prefers greater seclusion for its nest-building. When in the garden, it invariably sings either in the elms or in a particular birch, locations that the Purple Finch also chooses. Samuels thinks the song of these two birds so identical that he has frequently mistaken one for the other. I partly agree with him; but the Vireo lacks the power and richness of tone that the Finch possesses. I have heard this Vireo warbling with all his might while brooding on the nest.

There is a lane, a mile away, that separates a birch wood from a clearing, and the Warbling Vireo is housed, to his complete satisfaction, in the trees of this border-land. So plentiful are they in the birches, that it is perfectly safe in late May and June to take people to see and hear the birds in this haunt, for you are sure that they will make good your promise, at least in part, and give a private concert morning or afternoon; they decidedly disapprove of evening performances.

Length. [illegible]

Male [illegible]: Above olive-green, rump obscurely yellow. Below [illegible], sides of breast and belly clear yellow. Yellow line from beak to and round eye. *Two yellow wing bars. Iris white.* Tail feathers yellow-edged. Bill and feet dark lead-coloured.

Song: Colloquial. "Delivered with strong expression and very vari-

The Warbling Vireo's voice is not powerful but its melody is fluty and tender, and its song is characterized more by its air of happy contentment than by any other special quality. No writer on birds has grown enthusastic on the subject and Bradford Torrey among them does it scant justice when he says "this Vireo is admirably named, there is not one of our birds that zzzzzzzzzzzzzzzz can more properly be said to warble. He keeps further from the ground than theothers, and shows a strong preference for the elms of village streets, out of which his delicious music drops upon the ears of all passers underneath. How many of them hear it and thank the singer, is unhappily another question.

The nesting habits of the Western this species are practically the same as that of the Red-eyed Vireo.

The Warbling Vireo will be found in Manitoba and eastern Saskatchewan while the Western form or the Western Warbling Vireo will be found in Western Saskatchewan and Alberta.

FAMILY LANIIDÆ: SHRIKES.

Northern Shrike: *Lanius borealis.*

Butcher-bird.

PLATE 21.

Length: 9–10.50 inches.

Male and Female: Powerful head, neck, and blackish beak with hooked point. Above bluish ash, lighter on the rump and shoulders. Wide black bar on each side of head from the eye backward. Below light gray with a brownish cast, broken on breast and sides by waved lines of darker gray. Wings and tail black, edged and tipped with white. Large white spot on wings, white tips and edges to outer quills of tail. Legs bluish black.

Song: A call note, and in its breeding-haunts a sweet, warbling song.

Season: Permanent resident.

Breeds: From central Manitoba, Alberta and Saskatchewan northward.

in winter south to Guatemala and the West Indies

Nest: In a low bush; a basis of sticks, upon which is matted and felted a thick, warm superstructure of bark-strip, grass, and soft vegetable substance. (Coues.)

Eggs: 4–6; marblings of reddish brown and purple covering the gray-green ground.

Northern

Range: Manitoba, Alberta and Saskatchewan

The northern Shrike is somewhat erratic in its comings and goings never seen in large numbers, scarcely more than two or three at a time as is common with all winter birds, its movements are guided greatly by the food supply, if severe cold and heavy storms drive away the small birds and bury the mice upon which its feeds the Shrike must necessarily hunt for more favorable feeding grounds.

Grasshoppers, beetles, other large insects, and field mice are staple articles of its food in seasons when they are obtainable; in fact, next to insects, mice constitute the staple article of its diet, and protection should be accorded it on this account, even though we know the Shrike chiefly as the killer of small birds. The victims are caught by two methods: sneaking, — after the fashion of Crows, — and dropping upon them suddenly from a height like the small Hawks. In the former case the Shrikes frequent clumps of bushes, either in open meadows or gardens, lure the little birds by imitating their call notes, and then seize them as soon as they come within range. They often kill many more birds than they can possibly eat at a meal, and hang them on the spikes of a thorn or on the hooks of a cat-briar in some convenient spot, until they are needed, in the same manner as a butcher hangs his meat, and from this trait the name *Butcher-bird* was given them.

Their depredations are by no means confined to lonely fields and gardens. I was told by a friend living in Chicago, that last winter a Shrike visited her back yard regularly in search of English Sparrows. He would hide in the bushes, and, after killing half a dozen Sparrows, impaled them on

the frozen twigs of a lilac bush. After they had hung a few days, he eat portions of them, and then proceeded to kill more, a proceeding for which he should receive unlimited applause.

In the Hawk-like method of killing, the Shrike sits motionless upon the bare branch of a high tree, and, as the little birds pass unconsciously underneath, he drops upon one with unerring aim. He will also try to seize cage birds that are hung out of doors or even inside the window. Last spring I was startled by a violent blow, struck upon a window near which a Canary's cage stood upon a chair. The Canary was trembling with fright, and on going outside

I found some Shrike's feathers, with their wavy markings, adhering to the glass. He had evidently swooped without taking the heavy glass into his calculations, and had bruised his breast.

The White Rumped Shrike will be found in the southern parts of Manitoba, Saskatchewan and Alberta and has been recorded as far northk as Edmonton. The White Rumped Shrike is ~~a xxxxxxx sub-xxxxxxxx~~ somewhat smaller than the northern paler above with rump and upper tail coverts white. The nesting habits of this species does not differ materially from that of the Northern Shrike.

BOHEMIAN WAXWING. Bombycilla garrulus.

Length: 8 inches.

Male and Female: Crested. Brownish gray under tail coverts

Length: 6.50-7.25 inches.

~~xxxx~~ fore crown and sides of throat chestnut-rufous; Throat and eye stripe black; wing quills and primary coverts tipped with yellow secondaries usually with red tips tail tipped with yellow.

Song: Their call note is a hissing twittering sound.

Season: A resident very erratic may be seen continuously through one year or part of a year, and not be seen again for several [illegible].

Breeds: The nesting habits of this species are still imperfectly known, although they are liable to be found breeding over practically any part of their range.

Nest: The nest is usually composed of twigs rootlets and grasses [illegible] with finer grasses.

Eggs: From three to five dull bluish ground color splotch and speckled with blackish brown.

Range: Seaton states that they are a tolerably common Winter resident in Manitoba. Spreadborough records this species in Southern Saskatchewan while my records for ten years in Central Alberta record it anywhere from Jany 1st on through the greater part of the year.

The Bohemian Waxwing is interesting when seen in its wanderings through the country. I have met with them in large flocks in several different occasions and have always found them to be quiet sometimes sitting motionless for hours. The only note that I heard at these times was the hissing, twittering sound. Several will be setting in the tops of dead or partly dead trees, when all at once from some unknown cause they will raise and fly around in a circle for sometime then return to practically the same place which they had left.

I have never yet been fortunate enough to locate their nests but feel quite certain that they breed in this locality as I have seen them here through the entire season.

These birds are usually seen in company with the Pine Grn and Evening Grosbeaks.

FAMILY AMPELIDÆ: WAXWINGS.

CEDAR WAXWING. Bombycilla cedrorum. insert this before

Cedar-bird.

PLATE 22.

Length: 6.50–7.25 inches.

Male and Female: Above grayish cinnamon. Crest, breast, throat, wings, and tail, purplish cinnamon. Black line from back of crest, extending through eye, and forming black frontlets. *Secondary wing quills tipped with waxy points.* Tail feathers banded with yellow, and sometimes red tips. Bill and feet black.

Song: A buzzing call, — "Tweé, tweé-zeé." "A dreary whisper," Minot calls it.

Season: Earliest date of arrival April 5th, latest date a arrival June 11th, average date of arrival May 5th in Alberta. Manitoba and Saskatchewan probably somewhat earlier.

Breeds: Throughout the summer range.

Nest: A deep bowl made of twigs, lined with grass and feathers, and much miscellaneous material, either in a crotch, or saddled on the limb of a stout cedar bush or a tree, preferably the apple tree.

Eggs: 3–5, blue-white, with brown and lilac spots.

Range: Manitoba, Saskatchewan and Alberta northward.

You will at once recognize the Cedar Waxwing by its crest, yellow tail tips, red wing appendages, and straight black bill. Its feathers are more exquisitely shaded than those of our more brilliantly coloured birds. The specimen I have before me is a male in full plumage, who came to an untimely end by flying against a treacherous wire trellis. Nowhere except in the black frontlet, the tail, and wing tips does he show a distinct colour demarcation; all the rest of the feathers are tinted like a skilful blending of water-colours. The Cedar Waxwings only remain in pairs during the breeding-season (from late May until August), and at other times travel in flocks. It is only when in these flocks that they are conspicuous about the garden and old pastures; for when they are nesting they are very shy and stealthy in their movements.

Last May a flock of fifty or more lodged for a whole morning in a half-dead ash tree, near the house, so that seated at ease, I could focus my glass carefully, and watch them at leisure. They were as solemn as so many demure Quakers sitting stiffly in rows; once in a while they shifted about, and then seemed to do a great deal of apologizing for fancied jostlings. Their movements interested me greatly, until finally, to my surprise, I saw an illustration of the old story of their extreme politeness in passing food to one another, which I had always regarded as a pretty bit of fiction. A stout green worm (for they eat animal as well as vegetable food) was passed up and down a row of eight

soon as they come within ... they often kill many more birds than they ... eat at a meal, and hang ... on the spikes of a thorn or on the hooks of a cat-briar some convenient spot ... are needed, in the same manner as a butcher ... and from this trait the name *Butcher-bird* was given ... Their ... means confined to ... fields and ... by a friend living in Chicago

birds; once, twice it went the rounds, until half way on its third trip it became a wreck and dropped to the ground, so that no one enjoyed it,—a commentary, in general, upon useless ceremony. I could not help wondering, however, whether it was all disinterested politeness, or whether the worm was of a variety repugnant to Cedar-birds; as Hamlet put it, "Caviare to the general."

The food of the Waxwing is ~~extr~~ varied both according to season and other conditions. ~~Whitefruit~~ Wild fruit ,berries, and seeds form much of their food during the Fall and Winter months. Mr. A. W. Butler states that, "In Winter nothing attracts them so much as the hack-berry ((Celtis Occidentalis). Some years, early in Spring they are found living upon red buds." The investigations of the food of this species by F.E. L. Beal prove that the greater share of it consists of wild fruit or seeds with a very small allowance of cultivated fruits. Animal matter forms a relative small proportion of the food, but this s small proportion by nomeans indicated the insect feeding habits of the bird. It might well be suspected that so varied a diet would enable the bird to accomodate themselves to almost any conditions,

largely feeding upon the food that happens to be the most abundant at the time. Thus an outbreak of any insect pest calls the Waxwings in large flocks which destroy great numbers ~~of~~ To the almost entire exclusion of fruit as a diet for the time. It cannot be denied that the Waxwings do sometimes destroy not a little early fruit, calling down upon them rightous indignation; but at other times they more than make ammends for the mischief done.

FAMILY HIRUNDINIDÆ: SWALLOWS.

PURPLE MARTIN. Progne subis subis.

Length: 7.50 inches.

Male and Female: Deep, glossy, bluish purple, turning to black on wings and tail, which is forked. Bill dark; feet black. Female more brownish and mottled, below grayish white.

Song: Very soft and musical, beginning "peuo-peuo-peuo."

Season: Arriving about the middle of May

Breeds: Through range, rearing two broods a season.

Nest: A little heap of leaves; in the East in boxes, but in the West in hollow trees.

Eggs: 4–6, glossy white.

Range: Rare throughout Manitoba, Saskatchewan and Alberta.

Without being precisely a common bird, the Purple Martin is with us every summer, and its iridescent coat is a familiar sight. Its size and colour easily separate it from the rest of the family, and the sweet song completes the identification.

A little after dawn, in early May, you may see pairs of these Martins hovering in mid-air, half caressing, half quarrelling, while from time to time you will hear the liquid "peuo-peuo-peuo" merging into a more throaty ripple, like laughter.

The Martin is a favourite, and always seems to have been regarded as such. Houses are provided for his shelter, children are cautioned not to molest him, and the farmer, usually so callous toward bird attractions, has no word for him but of praise; as he consumes a vast quantity of evil insects, and these, too, of a larger size and different class from those captured by other Swallows, and he does not claim a single bud or berry to discount his utility.

Even among the wild men he was always a protected guest. Wilson relates that the Choctaw and Chickasaw Indians used to strip the leaves from small trees near their encampments, and hang upon the prongs, hollowed-out gourds that the Martins might nest in them, and the Mississippi negroes also hung similar contrivances on long canes to coax the Martin to stay.

The Purple Martin is as courageous as the Kingbird in attacking Crows and Hawks, but for all this he seems

and pe istently appropriating his houses. The Sparrow has the dvantage of being more prolific, as well as more gross an br tal in its methods, and represents in the bird

world a class of emigrants whose human prototypes the native American can barely withstand.

I first observed this species in Central Alberta about 75 miles northwest of Edmonton where a small colony had appropriated several deserted excavations made by the northern ~~flikkar~~ flicker in a dead black popular. They were not observed again that season but the following Spring I saw great numbers of them in the same locality where they had taken up their residence.

Cliff Swallow; Eaves Swallow: ***Petrochelidon lunifrons.***

Length: 5–5.50 inches.
Male and Female: Above brilliant steel-blue; beneath dusky white. Sides of head, throat and chin rufous. Wings and tail glossed with black. Bill dark; feet brown. *White, crescent-like frontlet,* hence its specific name *lunifrons,* from *luna,* the moon, and *frons,* front.
Song: A squeak, more than a twitter.

Season: Earliest date of arrival May 4th, latest date of arrival May 26th, average date of arrival May 18th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: In colonies, raising ~~two~~ broods a year.
Nest: Either a bracket, or gourd-shaped, with the opening at the neck; of mud, with straws and feather-lined; placed under eaves or rocky cliffs.
Eggs: 4–6, white with brown and purple markings.

Range: Manitoba, Saskatchewan and Alberta northward nearly to the Artic Circle.

This is the familiar Swallow which nests under the eaves and gables of the houses and barns throughout the settled

part of its reange. The nests are gourd shaped and at times are placed so closely together that they form a comp

it builds under the protection of shelving cliffs, the nests are of the typical bottle shape, and are often squeezed as closely together as the cells of a wasp nest.

This species is almost as brilliantly coloured as the Barn Swallow, but lacks the grace in flying which the sharply forked tail gives to the latter. Like all its tribe, it feeds upon insects, which it takes on the wing.

BARN SWALLOW. Hirundo erythrogastra.

PLATE 24. FIG. 2.

Length Variable, 6–7 inches.

Male and Female: Glistening steel-blue back, *tail deeply forked.* Brow and under parts rich buff, which warms almost to brick-red on throat. A partial steel-blue collar. Tail shows white band from beneath. Female smaller and paler.

Nest: A shall—

Song: A musical twitter like a rippling, merry laugh, — "Tittle-ittle-ittle-ee."

to the West Indies, Central America, and South America.

Season: earliest date of arrival May 2nd. latest date of arrival May 28th, average date of arrival May 16th in Alberta, Manitoba and Saskatchewan probably a few days earlier.

Breeds: Throughout the summer range.

Nest: A shallow bracket, made of pellets of mud and straw, placed on or against rafters, etc.

Eggs: 4–6, white, curiously spotted with all shades of brown and lilac.

Range: Manitoba, Saskatchewan and Alberta northward.

The Swallows belong to the air, as the Warblers do to the trees and the Thrushes to the ground. Swallows, unless when gathering before the fall migration, are seldom seen perching, except upon telegraph wires, and they leave these with such sudden and forking flight that they seem spurred by the electric current. If, in the daylight hours, you see a bird in rapid but nonchalant pursuit of insects, you may

(Form 91)

safely assume that it is either a Swallow or the Chimney Swift, for the Flycatchers have a different flight, the Nighthawk is more ponderous, and Whip-poor-wills seldom take to the air between dawn and dusk.

The distinguishing mark of the Barn Swallow is his sharply forked tail, brick-red throat, and buff breast. It is the commonest species and the most familiar, owing to the fact that it builds so freely about barns and dwellings. Its nest is one of the earliest that country children learn to know; and the first eggs that many a boy has stolen and concealed, while his conscience was still keen enough to prick him, have been those of the Barn Swallow.

Two broods are usually reared in a season their breeding continuing until July. These swallows are very sympathetic natures fo when danger threatens or disaster destroys a brood, friends quickly gather about and seem to offer advice or condolence.

TREE SWALLOW. Iridoprocne bicolor.

White-bellied swallow.

PLATE 24. FIG. 1.

Length: 6 inches.
Male and Female: Entire upper parts iridescent green, inclined to black on wings and tail. Under parts soft white. Bill black; feet dark. Female dull.
Song: A warbling twitter.

Season: Earliest date of arrival May 1st, latest date of arrival May 26th, average date of arrival May 11th in Alberta. Manitoba and Saskatchewan a few days earlier.

Season: April to the middle of September. A few stragglers remain later.
Breeds: Irregularly through range.
Nest: In dead trees, often in great colonies; here I have seen two or three pairs occupying old Woodpecker holes in telegraph poles.
Eggs: 4-9, usually 6, pure white.

Range: Mani oba, Saskatchewan and Alberta northward.

She is here, she is here, the Swallow!
Fair seasons bringing, fair years to follow!
Her belly is white,
Her back black as night.
— *Greek Swallow Song*, J. A. Symonds, Trans.

The Tree, or White-bellied Swallow seems nearly to correspond with the bird which was the herald of spring in Greece; for though our Swallow is a beautiful green above, except when at close range or when the light glances across its feathers, it appears black. The Tree Swallow, in times before the country was inhabited by white men, like many of its family, lived in hollow trees, but it now nests in Martin boxes and other convenient nooks, though it may be still found colonizing in old sycamores and willows.

If you live near the sand dunes or by a strip of beach edged with scrub bushes, go out and watch the gyrations of these lovely Swallows before the fall migration, the first part of September; you may also see the Bank Swallows or Sand Martins gather at the same time.

The Tree Swallow always seeks the vicinity of water at the time of the migration, probably because insects are more plentiful in such places. This has led people to form the

theory that it passed the winter under the mud bottom of large ponds and rivers in a state of hibernation. The matter has even been treated seriously, in spite of its manifest absurdity, the construction of the bird's breathing-apparatus precluding such a possibility.

The nests are usually located in the stubs of ~~Popular~~ Poplar or Birches in excavations made and deserted by a Woodpecker or Flicker, lined with finer grasses and finally the inner lining made with feathers. I have seen birds carrying large feathers that measured over seven inches in length when on reaching their nests they had great difficulty in getting them in to the nesting cavity, when placed in position part of the feather protruded from the doorway showing that the birds certainly did not have a very ~~great~~ good idea of selecting their nesting material.

BANK SWALLOW. Riparia riparia.

Sand Martin.

PLATE 19. FIG. 2.

Length: 5 inches. The smallest of our Swallows.
Male and Female: Above dull mouse colour, wings and tail brownish, below white, with a brownish breast band. Bill and feet dark.
Song: A giggling twitter.

Season: Earliest date of arrival May 5th, latest date of arrival May 23rd, average date of arrival May 12th. in Alberta. Manitoba and Saskatchewan a few days earlier.

Breeds: All through its North American range.
Nest: In tunnelled holes in clayey banks; made of grass and lined with a few feathers.
Eggs: 4–6, pure white.

Range: Manitoba, Saskatchewan and Alberta northward.

The Bank Swallow is the plainest, as well as the smallest, of the family. His back is the colour of the damp mottled gray sand with which he is closely associated, and he shows no glints of purple, steel-blue, and buff, like his brethren, but wears a dusky cloak fastened about his throat with a band of the same colour.

There is usually a large colony of these Swallows along a cut bank in the City of Edmonton where the K.Y E.Y. & Pacific Railway made a cut on the north bank of the Saskatchewan River. The holes are not arranged with any sort of regularity but the birds have invarably chosen the stiffer loam which was least likely to crumble away in the boring process.

The cavities usually run back from 18 inches to 2 feet with an enlarged room at the farther end which is lined with grasses, feathers, and in some instances wool plentiful in such places. This

three feet of the top, and they are almost all wider than they are high, as is frequently the case with mouse-holes. These tunnels vary from a foot to eighteen inches in length, and at the end are the wisps of grass and feathers that

hold the fragile white eggs. The feathers of many different birds are found in the nests of this colony, — the breast-feathers of Ducks, Gulls, and various Shore-birds, which are not in this vicinity at the Swallow's nesting-time.

The Swallows, as a family, show great inventive qualities in the way in which they have adapted their habits to the encroachments of civilization. Now, almost wholly domesticated, they seem to prefer man's company, and each one has appropriated a separate location for nesting. The Bank Swallow adheres the most closely to his original haunts; but even he may be found occasionally building under a bridge.

FAMILY TANAGRIDÆ: TANAGERS.

Scarlet Tanager: *Piranga erythromelas.*

PLATE 25.

Length: 6.75–7 inches.

Male: A rich scarlet. Wings and tail black. Feet deep horn colour.

Female: Olive-green above; dull olive-yellow below. Wings and tail dusky.

Song: Mellow and cheerful, — "Pshaw! wait — wait — wait for me, wait!" Call note "chip-chur!"

and Eastern Saskatchewan

Season: Arriving in Manitoba about the middle of May known

not a resident of XXXXXXXXXXXXXXX Alberta.

Breeds: Throughout its summer range.

A few years ago the Scarlet Tanager was as familiar hereabout as the Yellow Warbler, or the Wood Thrush: but now it has, in a great measure, left the gardens and frequented woodlands, and become the resident of lonely woods. Together with all of our brilliantly plumed birds, it has been persecuted almost out of existence. Now that this bird slaughter is against the law in all communities that pretend to be civilized, the killing is at least abated, but the Tanager's confidence in humanity has not yet returned.

Nest: Rather flat and ragged; made of sticks, root fibres, etc.; placed on the high horizontal branch, preferably of an oak or pine.

Eggs: 3–5, dull green, thickly spotted with brown and mauve.

Range: Manitoba and Eastern Saskatchewan.

None of the tunnels are within

Breeds: Through its United States range.

Nest: Rather flat and ragged; made of sticks, root fibres, etc.; placed on the high horizontal branch, preferably of an oak or pine.

Eggs: 3–5, dull green, thickly spotted with brown and mauve.

Range. [illegible] United States, west to [illegible]

It is impossible to mistake this bird in full spring dress, for any other. His fall coat, however, is olivaceous like the female, and, as for the unmoulted young, they are a motley lot, mainly olive-green, but with little tufts of scarlet, yellow, and bright green, appearing at random, as if they were examples of feather patchwork. It is easy to see the wisdom that clothes the female and young of this flaming Tanager in sober colours. If a brooding female wore a scarlet covering, it would surely betray the nest to all enemies; and if the young were likewise conspicuous, they would be gobbled by Hawks before they understood that Hawks are hardly friendly.

The scarlet Tanger is a fruit and berry eater, as well as a consumer of beetles, grubs, larvæ and winged insects therefore being of great benifit to the farmer.

The eggs are from 3 to 5 in number of a greenish blue, speckled and blotched with brown, chiefly at th e larger end.

The disposition of the Scarlet Tanger is retiring, in which respect he differs greatly from the Summer Tanger, which frequents open groves, and often visits towns and cities. A few may be seen in our parks, and now and then children have picked the bright dead forms and wondered what might be its name.

FAMILY FRINGILLIDÆ: FINCHES, SPARROWS, GROSBEAKS, ETC.

EVENING GROSBEAK. Hesperiphona vespertina vespertina.

Length: 8 inches.

Male: Brownish yellow; wings, tail, and crown black; exposed part pertils white.

Female: Dingy brownish gray, more or less tinged with Yellowish; throat and belly whitish; tail-coverts and tail feathers on inner web, tipped with white. (Chapman)

CANADIAN [illegible] COMPANY

[illegible] birds spent their time between an arbor-vitæ hedg[illegible] group of pines. After an unusually severe sn[illegible] became very hungry and descended to the ground fe[illegible]ed, and, while they refused to eat crumbs, relished some

Song: Call notes resembling those of the English Sparrow.

Season: Very irratic, liable to be seen in any locality within its range at any season of the year.

Breeds: The nesting habits of this species are still imperfectly known, although they are liable to be found breeding over practically any part of their range.

Nest and Eggs: The eggs are from 3 to 5 in number a greenish white spotted and blotched with brown. The nest is made after the saem pattern as that of the Rosebreast.

Range: Liable to be met with through any part pf the wooded portions of Manitoba, Saskatchewan and Alberta.

In the Spring of 1909 I observed these birds early in April flying across a bit of clearing and knew by their actions that they must be nesting in the immediate vicini ty.

One afternoon I started out with the determination of finding their nest and after searching for an hour or two discovered it up forty feet in a live birch tree, On climbing up to the nest I found that it contained one nearly fully fledged male, dead. The birds had been in this locality for some time and ware still hovering around the nest. The nest was composed of fine sticks lined with finer ones and was decidedly after the pattern of the nest constructed by the Rosebreated Grosbeak. Ix have seen them during each of the ten years I have been keeping records in this locality but I have not succeeded in locating another nest.

Their call notes is decidedly sparrowish in form and reminds one very forceably of the English Sparrow, I have never heard their full song, the best being a pecular twitter.

PINE GROSBEAK. Pinicola enucleator leucura.

PLATE 26. FIG. 1.

Length: 9.10 inches.

Male: Heavy bill, giving it almost the appearance of a Parrot. Above *general colour strawberry-red*, with some gray fleckings, *deepest* on *head* and *rump*. Wings and tail brown; some feathers

edged with lighter brown and some with white. Below paler red, turning to grayish green on belly. Bill and feet blackish.

Female: Ash-brown, with yellowish bronze wash on rump, head, and breast.

Song: "A subdued, rattling warble broken by whistling notes."

No. 131

Season: Seen in central Alberta dates ranging from Jany 21st to April 1st. Very irregular in appearance.

Breeds: Probably breeding through the summer range although no definate breeding survey of the breeding of this species is at hand.

Nest: Composed of twigs and rootlets etc, lined with grasses. The nest somewhat resembles that of the other Grosbeaks.

Eggs: Three or four with bluish ground color dotted and spotted with lavender or drab.

Range: They range at least during the Winter through the wooded portions of Manitoba, Saskatchewan and Alberta and northward.

"The Pine Grosbeak is a retiring bird and would seem to be somewhat shy as it does not frequent the roadside or inhabited places except when forced to do so by the lack of food. This, however, is not the case, for in the forests where it makes its home it is not difficult to approach. It will frequently alight and begin feeding within a few feet of an observer."

During the coldest weather in Feby 1906 I observed a great number of these birds in company with thr Bohemian Waxwing feeding on buds along the Saskatchewan River near Edmonton, they seemed to have no fear whatever and allowed me to approach to within four or five feet before taking flight and then would only go a short distance.

The song of this species is said to be very attractive, but is of course seldom heard so far away from the breeding-haunts. Mr. Bicknell calls it a subdued, rattling warble, which is sometimes heard as early as February and March, and Dr. Coues calls the birds fine musicians. They come in pairs or in flocks, and as the young males do not attain their strawberry-coloured feathers until the second year, and the females are a brownish yellow, the proportion of red birds in these flocks is quite small.

Purple Finch: ***Carpodacus purpureus.***

Length: 5.75–6.25 inches.

Male: Until two years old resembles a dull-coloured, heavy-billed sparrow; when *mature*, the head, shoulders, and upper breast have a wash of *raspberry-red*, lower parts grayish white, wings and tail dusky with some reddish brown tips. Bill and feet brown.

Female: Olive-brown, clearer on rump, and streaked above and below with dusky brown. Whitish beneath, and streaked on sides of breast with arrow-shaped marks.

Song: Joyful and sudden, — "O, list to me, list to me, hear me, and I'll tell you,—you, you!"

Season: Earliest date of arrival April 19th, latest date of arrival May 16th, average date of arrival May 3rd in Alberta. Manitoba and Saskatchewan probably a few days earlier.

Breeds: Through its summer range.

Nest: In a bush or tree, of grass and fibre, and lined with horsehair; a flat nest.

Eggs: 4–5, greenish white, scratched and spotted with black and lilac.

Range: Manitoba, Saskatchewan and Alberta northward.

This is the most melodious of the Finches, who, perching high in the elms on the lawn or in the birches by the river-bank, pours out his gushing, liquid warble, while at the same time he is completely hidden from sight. Long ago, being told that a song which had delighted me belonged to the Purple Finch, I tried to obtain a good view of him, expecting to see a bird whose purple coat should match his regal voice, — but not at all. The first specimen that I caught (with my field-glass), when in the act of singing, was dull and Sparrow-like. Then followed the explanation that the males take two seasons to perfect their plumage, and that even then they are not *purple*, but merely washed locally with a peculiar shade of red.

I think many early ornithologists who were responsible for the naming of our birds must have been either colour-blind or possessed of very limited vocabularies, for a modern reading of many of their colour terms means dismay and total collapse to the unfortunate novice. Burroughs, with his fine sense of perception and language combined, at once locates this Finch. "His colour is peculiar," he says, "and looks as if it might have been imparted by dipping a brown bird in diluted poke-berry juice. Two or three more dippings would have made the purple complete."

In looking for this Finch, then, you must rely greatly upon his song, remembering that he may or may not be red coloured on the head and back, and that whether he is or not, you will find it difficult to discover.

The suddenness with which the Purple Finch bursts into song renders him one of our most conspicuous songsters. and recalls the notes of the English Chaffinch. [illegible] exquisite singer. They sing either perched or on the wing and to my notion the most beautiful song is uttered while the are making a wavering flight or ascending or descending to a considerable height.

English Sparrow: *Passer domesticus.*

House Sparrow; Gamin, Tramp, Hoodlum. (Coues.)

Length: 5 inches.

Male and Female: Ashy above, shoulders and back striped with black and chestnut. Dark chestnut mark over eye and on sides of neck. Chestnut and white bar on wings, bordered by a black line; tail gray. Bill blue-black; feet brown. Female paler; wing bars indistinct.

Song: A harsh chirp.

Season: A persistent resident.

[illegible] Mountains to Colorado

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Breeds: Everywhere in towns and villages and at farms far [illegible] removed from either.

Nest: Rough, and loosely made of straws, sticks, or any material which circumstances offer.

Eggs: 4–8, greenish white, speckled with chocolate and lavender.

Range: Manitoba, Saskatchewan and Alberta. I have observed this species on farms a hundred miles northwest of Edmonton 25 miles from a railway.

This unfortunate Sparrow, bearing a load of opprobrium which he deserves, though largely through no fault of his own, has for some time been furnishing an avi-social problem to both England and America. In the first-named country, even the investigation of a special committee of the House of Commons has failed to ascertain, with anything approaching certainty, whether this Sparrow's services as an insect-destroyer equal his own destructive qualities.

In Australia, it is said that the fifty birds originally imported now flock by millions, and make the third of the triad of emigrants with which unthinking people have scourged the country, the other two being rabbits and the Scotch thistle.

Here in America, the Sparrow is an absolute and unmitigated nuisance, but for this, the unwise and superficial theory that brought him over is chiefly to blame. No thought was given to the change of habits that the change of climate might effect in the bird's whole nature. A partial insect-eater, at home, though of a seed-eating family, brought here to free the trees from canker-worms, he, instead, relapsed soon after, and became a rigid seed-eater.

Theodore Wood, in his instructive little book,—"Our Bird Allies,"[1]—devotes two chapters to an unprejudiced review of the Sparrow question, which are well worth reading, in which he quotes Prévost-Paradol and many other authorities. "What wonder," he says, "if the Sparrow, both in America and New Zealand, should turn from a diet of insect to one of grain and fruit? Does not even man himself alter his food in accordance with the climate? Does he not, leaving England for a warmer country, depend more upon vegetable food and less upon animal?"

It is not the grain that he consumes that makes us at war with the Sparrow, but because he steadily puts to rout our most familiar birds, destroys their young, and gives us only his ugly chirp in the place of their songs, and his useless presence instead of their insect-consuming powers. The destruction of the Sparrows, eggs and nests, is now almost universally approved in the United States. Dr. C. Hart Merriam of the Department of Agriculture, Washington, has prepared a consensus of reports from many sources, containing evidence for and against the Sparrow, —168 being for, 837 against, and 43 neutral. The report also contains a list of native birds that have been more or less molested by the Sparrow, among which are not only the Wrens, Bluebirds, and Martins of our garden bird-boxes, but the valiant Kingbird, the Horned Lark, Hermit and Wood Thrushes, the Mockingbird, Purple Grackle, Meadowlark, and many Woodpeckers.

I am not of the opinion that this bird has yet become such a pest in the Prairie provinces of Canada as it has in the eastern provinces and the eastern United States. In this locality birds are quite scarce during the Winter months and as the English sparrow is with us during that

time we seem to forget some of the damages he does during his sojourn with us in the Summer. He feeds his young upon insect matter thereby destroying great quanities of insect matter which would be injurous to the farmer; while on the other hand he destroys considerable grain and drives away the bluebird, robin, tree swallows and other birds; which would be more benificial to the farmer than is the English Sparrow himself therefore wei,h him in your own balance and consider whether he is a detriment or a benifit in your particular locality; and that he may be inthe years to come after the country has become more settled and the balance of nature harder to keep in its proper form.

Crossbill: *Loxia curvirostra minor.*

PLATE 27.

Length: 6 inches.

Male: General colour Indian red. Head shaded with olive. Back and shoulders brown with red edgings to the feathers; wings and tail brown. *Beak crossed at the tip.*

Female: General colour greenish yellow. Dull yellowish tints on the head, throat, breast, and rump. Wings and tail brown with lighter edges to some feathers.

Song: Winter note; a snapping chirp.

Season: An irregular visitant.
Breeds: Through their summer range.

Nest: Among the twigs or in the fork of a tree, having a base of bark and sticks, and being lined with finer materials.

Eggs: 3-4, greenish, marked with brown and lilac at larger end.

Range: Recorded by various authorities ad ranging through Manitoba, Saskatchewan and Alberta.

"The Crossbills are notable for their small size, being considered and described as dwarfts of the family. Their food consists exclusively of pine, fur, and larch which accounts for the fact that they are numerous in northern latitudes where these trees abound. When the cones are abundant they visit in great numbers many places where they have not been for years, appearing at regular intervals, and not confining themselves to particular localities.

"They are very sociable even during the nesting season. Their nests are usually built among the branches of the fir trees, and there they deport themselves gaily, climbing nimbly, and assisting their movements, as parrots do, with their beaks. They will hang downwards for minutes clining to a twig or cone. Seeming to enjoy their apparently uncomfortable position. They fly rapidly, but never to a great istance, th pleasure they experiance in the society of their mates is often displayed by their fluttering over the tops

of the trees as they sing, after which they hover for a time, and then sink slowly to their perch. In the day time they are generally in motion, with the exception of a short time at noon. During the Spring, Summer and Autumn they pass their time in flying from one locality to another.

Their nests are composed externally of twigs and rootlets, the interior being lined with fur and feathers.

Redpoll: *Acanthis linaria.*

Redpoll Linnet.

Length: 5.50 inches.

Male: *Head, neck, breast, and rump* washed with rich *crimson*, over a ground of gray and brown. Back, wings, and tail dusky; dusky white beneath. Tail short and forked; wings long and pointed. Bill very sharp, and either yellow, tipped with dusky, or black; feet dark.

Female: Dingy, having the crimson only on the crown.

Song: A Canary-like call note and a lisping song; sometimes given when flocking as well as in the breeding-season.

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Season: A winter visitor from the north.

Breeds: In boreal regions.

Nest: A compactly built structure composed of fine roots and grasses, lined with feathers and down usually located not more than two or three feet from the ground.

Eggs: 5 or 6 bluish green ground sparcely speckled with reddish brown.

Range: Manitoba, Saskatchewan and Alberta in Winter.

The Redpoll, Redpoll Linnet, or Little Snowbird, as it is locally called, comes out of the north on the snow clouds, with the Buntings and Crossbills, and returns to its breeding-grounds usually before its spring song is heard. It is most frequently to be seen in weedy pastures, where it feeds upon the seeds of small herbs, and after heavy snows have covered the lowlands it retreats to the many-seeded compositæ that swarm along the sides of grass-grown roads,

and in an extremity, feeds upon tree buds, especially those of the black birch. It never becomes as friendly as its cousin, the American Goldfinch, but you can easily identify it and watch its movements when it is feeding upon some conspicuous spray that protrudes from the fresh snow. At such times a flock of Redpolls, with their little ruddy crowns, are the prettiest things imaginable. Thoreau's soliloquy upon these winter birds, as he stood looking over the late November landscape, is too beautiful to quote merely in part. He says: "Standing there, though in this bare November landscape, I am reminded of the incredible phenomenon of small birds in winter, that erelong, amid the cold, powdery snow, as it were a fruit of the season, will come twittering a flock of delicate, crimson-tinged birds, Lesser Redpolls, to sport and feed on the seeds and buds just ripe for them on the sunny side of a wood, shaking down the powdery snow there in their cheerful feeding, as if it were high midsummer to them. . . . They greet the hunter and the chopper in their furs. Their Maker gave them the last touch, and launched them forth the day of the Great Snow. He made this bitter, imprisoning cold, before which man quails, but He made at the same time these warm and glowing creatures to twitter and be at home in it. He said not only let there be Linnets in winter, but Linnets of rich plumage and pleasing twitter, bearing summer in their natures. . . . I am struck by the perfect confidence and success of Nature."

GOLDFINCH. Astragalinus tristis tristis.

Wild Canary, Thistle-bird, Yellowbird.

PLATE 28. FIG. 2.

Length: 4.80–5.20 inches.

Male: Body, all but wings, tail, and frontlet, a *clear gamboge-yellow.* Frontlet black. Wings black, varied with white. Tail blackish with spots of white on interior of quills. Bill and feet flesh-

coloured. In September the black frontlet of the male disappears, his colours pale, and he resembles the female and young. In April the spring moult begins, and often is not completed until middle May.

Female: Above brownish olive, below yellowish.

Song: A wild, sweet, Canary-like warbling. Call note, "Ker-chee-chee-chee, whew-é, whew-é!"

Season: Earliest date of arrival May 22nd, latest date of arrival May 30th, average date of arrival May 26th in Alberta. Manitoba and Saskatchewan a few days earlier.

[illegible] of their usual [illegible]

Breeds: Throughout the entire summer range.

[illegible] me, it was with no little surprise that I heard a [illegible]

Nest: Round, very neat, and compact; of grass and moss, lined with seed and plant down, usually in a branch crotch.

Eggs: 4-6, blue-white, generally unmarked.

Range: Manitoba, Saskatchewan and Alberta.

Pine Siskin: ***Spinus pi.***

The American Goldfinch, known under many titles, is as familiar as the Robin, Catbird, and Wren, but its beauty and winning ways always seem new and interesting. [illegible]

In Alberta these birds are not seen except in scattered flocks the Saskatchewan River in all probability being practically their northern limit although stragglers may be seen several miles to the northward

Its spring song begins early in April, though its plumage does not resume the perfect yellow until late May; the song remains at its height all through July and well into August, but ceases, almost abruptly, at the end of that month

These birds do not mate until late in the Spring sometimes not until the latter part of June. They usually choose the willows or low bushes for their nesting site, their duties in nest building not beginning until the majority of other birds have completed their nesting duties and their young have gathered in flocks preparitory to the trip southward.

There is no more cheerful and confiding garden companion than this Goldfinch. Seen even at a distance his markings are distinct, his identity complete; you do not have to puzzle or worry, but simply enjoy his society;

lowlands it retreats to the many-seeded

he does not wish your berries, but helps you remove the dandelion down from the lawn before the wind sows it broadcast, and all the while you hear Canary-like music, but wilder and more joyous, from behind a twig lattice instead of cage bars.

The black cap gives the male a ferocious look, wholly at variance with his character, while his mate is agreeably feminine and gentle. These birds combine the rich colours, which we associate with the tropics, and the stout-hearted, cold-enduring New England nature, softened by the most agreeably cosmopolitan manners. If you wish them to live with you and honour your trees with their nests, plant sunflowers in your garden, zinnias, and coreopsis; leave a bit of wild grass somewhere about with its mass of compositæ. Coax the wild clematis everywhere that it can gain footing; and in winter, when these joyous birds, gathered in flocks, are roving, hard-pressed for food, scatter some sweepings of bird seed about their haunts, repaying in this their silent season, their summer melody.

Pine Siskin: *Spinus pinus.*

Length: 4.75 inches.

Male and Female: Striped generally; above olive-brown and gray, darkest on head and back. Below lighter, sometimes having a decidedly sulphur-yellow tinge on rump and base of wing and tail feathers. Bill and feet brown.

Song: Resembling that of the American Goldfinch, but in a more fretful key, and seldom heard in this locality.

Season: Earliest date of arrival April 1st, latest date of arrival April 17th, average date of arrival April 7th in Alberta. Probably seen in Manitoba and Saskatchewan a few days earlier.

Breeds: Throughout the summer range.

Nest: The nest is rather bulky for the size of the bird and is composed of fine bark, weed stocks, plant down etc.

Eggs: Light green, spotted with b

Range: North America generally, in w to the Gulf States and Mexico.

The Pine Siskin, as its name in

Eggs: Light green, spotted with brown.

Range: In Winter through Manitoba, Saskatchewan and Alberta, nesting through considerable portion of this ran[illegible] i[illegible] on the authority at hand cannot be definitely stated, although I have found them nesting in central Albert[illegible].

The Pine Siskin, as its name implies, is a lover of evergreens, and spends the winter in roving from copse to copse. It is strictly a seed-eater, and consumes alike the kernels of large cones and the seeds of low herbs. It has the dipping flight of the Goldfinch, and many other characteristics of the two birds are similar. You will be most likely to identify the Pine Siskin as it clings to tufts of spruce cones, peering between their scales; the sulphur-yellow tinge of the feathers showing plainly against the deep green.

"About the time the first dandelions are blown and the green grass is flecked with the winged seeds, you will see flocks of little grayish brown sparrow like birds with touches of yellow on wings, backs and tail eagerly devouring these fugitive morsels. They may be seen too, upon the evergreen trees singing in chorus the softest, sweetest so[illegible] immaginable."

Some of the Siskins have learned that man may be trusted and build their nests in the immediate vicinity of his dwelling. Its song very much resembles that of the Goldfinch. SNOW BUNTING. Plectrophenax nivalis nivalis.

Season: A Winter resident.

Length: 7 inches.
Male and Female: *Summer plumage* white, with the exception of black back, white-banded wings, tail, and band across back. *Winter plumage* soft browns and white,—dead-leaf colours and snow. Bill and feet black.
Song: Thoreau says, "a soft, rippling note."

Breeds: In the Arctic regions.
Nest: Thickly lined with feathers set in a tussock.
Eggs: 4–6, variable in size and colour, whitish speckled with neutral tints.

Range: Manitoba, Saskatchewan and Alberta in Winter.

A bird well named, for the Snowflake, hurried from the north by fierce winds and weather, comes to us out of the snow-clouds. Travelling in great flocks, which are described as numbering sometimes a thousand, they settle down upon the old fields and upland meadows, subsisting upon various seeds. Their winter plumage, by which we alone know them, is exquisitely soft and beautiful, and the birds themselves have a wonderfully mild and spiritual expression as if they had come from an unknown region, and craved a little food and shelter, but conscious that while here they are the veriest birds of passage.

Although the Snow Bunting is a native of the ~~Arctic~~ Arctic latitudes they reach their Winter home a few weeks before the severe weather sets in where they feed almost entirely upon weed seed. They do not seem to mind the cold and in fact seem to enjoy themselves very much even in the coldest weather. When the snow is quite deep they glean their living from weed stocks that protrude above the snow thereby destroying enormous quanities of weed seed which if left to grow would cause the farmer a great deal of extra work to eradicate.

They return to the north about the middle of April on three different years I noticed the last flock on the 19th. Providing that we should have a severe cold spell about this time they delay their departure until more favorable weather.

Lapland Longspur: ***Calcarius lapponicus***

Length: 6.50 inches.

Male: *Winter plumage*, top of head black, edged with rusty, black above, the feathers all tipped with white. A rusty black patch behind and beneath the eye. Below grayish, with faint black markings. Bill yellow, tipped with black; feet and legs black. Long hind claw or spur.

Female: Rusty gray above, whitish below.

Song: A charming song in the breeding-season, uttered while soaring like the Skylark's.

rarest of all, Lapland Longspurs, the first time that I ha identified them here.

Season: Earliest date of arrival April 17th, latest date of arrival April 30th, average date of arrival April 29th in Alberta. Manitoba and Saskatchewan probably a few days earlier.

Breeds: In the Arctic regions, where it has a thick, fur-lined, grass nest, set in moss on the ground.

Range: Common as a migrant throughout Manitoba, Saskatchewan and Alberta.

"The Lapland longspur is another sparrow of the ~~Arctic~~ Arctic zone. It is called longspur on account of the great development of its hind claw, a feature characteristic of the Snowflake, also, but to a slightly lesser degree. It ranges a little further to the south in Winter than the Snow Buntings, and resembles the latter somewhat in its Winter plumage of mixed brown, though the white-marked wings and tail of the Snowflake serve to distinguish it from the Longspur.

The ~~Arctic~~ Longspurs come with the Snowflakes in the Autumn, and go away with them in the Spring. Like the Snowflakes, they are protectively colored, strictly terrestrial, and highly gregarious."

Mr. Seaton in his birds of Manitoba speaks of seeing on the plains flocks of tens of thousands, of these birds and refers to their voices as a tornado of whistling. He states that in May these enormous flocks feed in newly sown grain fields and that the stomachs of the birds contained oats wheat buckwheat and grass seed.

CHESTNUT-COLLARED LONGSPUR. Calcarius ornatus.

Length: 6.2 inches.

Male: Throat and cheeks buff; breast and belly black; crown black, nape chestnut; lesser wing coverts black tipped with white.

Female: Above grayish brown streaked with black; below pale buff. (Chapman)

Song: A short shrill song which is often uttered while the bird is on the wing.

Season: Arriving in the breeding grounds about the middle of May.

Breeds: Throughout Manitoba, Saskatchewan and Alberta.

Nest: Sunk flush with the surface of the ground and lined with grasses and weed stems.

Eggs: 3 or 4 grayish white more or less mottled and clouded with a pale purplish gray overlaid with numerous surface markings of dark brown.

Range: Manitoba, Saskatchewan and Alberta.

This Longspur may be identified by the long hind toe nail and the chestnut markings on back of neck.

These birds are usually seen in flocks, at times in company with other Longspurs, feeding in the stubble fields and in the open park like regions in the vicinity of heavy timbered lands. They can be approached quite easily and are quite redily identified with the glases at some distance.

They are principally seed eaters, destroying enormous numbers of weed seeds which if allowed to grow would cause the farmer an untold amount of labor and expense to eradicate.

McCOWN'S LONGSPUR. Rhynchophanes mccowni.

Length: 6 inches.

Hind-toe nail as long as toe; all but middle pair of tail feathers with white, the outer one white to the tip, the others tipped with black; lesser wing-coverts chestnut.

Male: Throat and belly white, breast and crown black; back grayish brown streaked with black.

Female: Below white washed with brownish; above grayish brown streaked with black. The male in Winter like female but a partly concealed breast patch; tail with more white. (Chapman

Song: A soft twittering very pleasing song. The call note simply being a Chip uttered at each stroke of the wing when in flight.

Season: Earliest date of arrival April 20th, latest date of arrival April 24th, average date of arrival April 22nd in Alberta. Manitoba and Saskatchewan a few days earlier, possibly.

Breeds: Throughout its entire summer range.

Nest: A hole in the ground lined with a few dried grasses.

Four or five very closely resembling these are Smith's Longspur.

Range: Manitoba, Saskatchewan and Alberta.

These Longspurs are generally found in large flocks, when they rise on the wing they utter a sharp click, repeated several times in quick succession, and move with an easy undulating motion for a short distance, when they alight very suddenly, seeming to fall several feet to the ground. When in the air they fly in circles, to and fro for a few minutes and then alight, keeping up a constant chirping call. These usually nest in the open prairie and either make their nest in a small excuvation in the ground lined with finer grasses or build it in the shelter of a tuft of grass. When approached the female slips quietly off the nest running to a considerable distance before taking wing.

WESTERN VESPER SPARROW: Poo cetes gramineus confinis.

Bay-winged Bunting.

PLATE 29. FIG. 1.

Length: 5.75–6.25 inches.

Male and Female: Above brown, varied with dusky. *Lesser wing coverts bright bay.* Below soiled white, striped everywhere except on the belly with brown. *No yellow anywhere.* Outer tail feathers partly white, appearing conspicuously like two white quills when the bird flies. Upper mandible brown; lower and feet yellowish flesh-coloured.

Song: Sweet and clear, less loud than the Song Sparrow's,—"Chewee-chewee-cheewee, tira-lira-lira-lee!"

Season: Earliest date of arrival April 6th, latest date of arrival May 26th, average date of arrival May 5th in Alberta. Manitoba and Saskatchewan possibly somewhat earlier.

Breeds: Throughout its Canadian range.

Nest: Sunk to the rim in the grass or ground, quite deep; of grasses; as carefully made as if it were a tree nest.
Eggs: 4–6, thickly mottled and spotted with brown.

Range: Manitoban Saskatchewan and Alberta.

This is the Sparrow which is identified by the red-brown shoulders and the two white tail quills, and who, though living near the ground, often soars singing into the air. Its song, though less constantly heard, is as familiar as the Song Sparrow's, and its habit of singing from late afternoon until twilight has given it the name of Vesper Sparrow.

The characteristics of the male and the female are the same. The exposed part of the outer and the tip of the second tail feathers are white. Their character are very marked as the bird alights. The feathers of the under side of the body are usually yellowish white and the tips of the wings are a light chestnut brown. It does not seem to shun one's presence, but will run along the side of the road, a short distance ahead, occasionally stopping for observation.

The Vesper Sparrow builds its nest on the ground without reference to any special plant protection except that of grass or any other low herbage. The eggs are usually four in number, the general color of which is light gray marked, in a variable manner, by dull reddish-brown spots or blotches.

The Vesper Sparrows are, in the main, seed-eaters, but during the summer they also feed upon insects, earthworms, and berries. They are birds of the roadside and of waste fields, where they are abundant in early autumn, fluttering about in flocks, now perching on a fence rail, and as you approach them, scattering widely, only to collect again a few feet further on. They are dingy-looking birds in the distance, but the white tail quills will always name them.

WESTERN SAVANNA SPARROW: Passerculus sandwichensis alaudinus.

Length: 5.50–6 inches.

Male and Female: Above, back, wings, throat, and sides striped in various shades of brown and bronze. *Yellowish stripe on crown and over eye,* and *yellowish wash around neck.* Cheeks golden bronze. *Below whitish.* Bill dark above, light below; feet light flesh-coloured.

Song: Described by Samuels as sweet and soft. "Chewee-chewitt-chewitt-chewitt-chewé-et-chewee!"

Season: Earliest date of arrival April 21st, latest date of arrival May 26th, average date of arrival May 12th. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout its range in Canada.

Nest: A slight affair, sunken in the ground like the last species.

Eggs: Also motley, like the last.

Range: Manitoba Alberta and Saskatchewan northward to about the limit of trees.

The Savanna Sparrow is a common summer resident, ~~being found~~ a ground Sparrow (which is one of its local names); for, in addition to building on the ground, it limits its flight to low bushes. Its plumage is so streaked and mixed that it blends with the earth,—a great protection to the bird, but a condition which makes identification difficult. Keep in mind that its *under parts* are *whiter than in other Sparrows.*

I associate this Sparrow with early June walks through the marshes and upland meadows, when the wild flowers are calling "Come pick us"; when the beach plum's white plumes are fading with the iris, and the star-grass and yellow thistles are in bloom, and the tall blackberry bushes trace the tumble-down fences with their wands. Then you may see the Savanna Sparrow hurrying through the sand-grass, seeking the cover of bayberries, only to slip through and disappear. He will not indicate by the slightest hint which little circle of grass margins his home, barely separating the young from the earth itself. He will lead you as far away from it as he is able, and, if it is late afternoon, will beguile you with his simple song, from no more ambitious perch than a fence rail.

Mr. J. Dwight says "The song is magnificant– a weak, musical little trill following a grasshopper-like introduction,

than a loon call. The singer flocks come [illegible] and are not then in

is of such small volume that it can be heard but a few rods.

It usually xxxxxxxxxxxx resembles tsip-tsip-tsip-se-e-e-s'r-r-r.

ore singing is heard towards sunset, when of a quiet evening

the trills are audible at greater distances."

WHITE-CROWNED SPARROW: Zonotrichia leucophrys leucophrys.

Length: 6.50–7 inches.
Male and Female: *White crown* set between two black stripes; white eye stripes. Cheeks, throat, and back of neck gray. Below light gray; some buff on sides and belly. Wings edged with bay, and having two white cross-bars; tail plain. Female, head rusty, paler all through. Bill and feet reddish brown.
Song: 6 or 7 notes, forming a plaintive cadence.

Season: Earliest date of arrival May 2nd, latest date of arrival May 18th, average date of arrival May 11th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Season states that it probably breeds in northeastern Manitoba. Preble states that it breeds through the northern part of Alberta. Other nesting localities are not definately known.

Nest and Eggs: Not to be distinguished from those of the White-throated Sparrow.

Range: Throughout Manitoba, Saskatchewan and Alberta as a Spring migrant.

One of the largest Sparrows, and also conspicuously marked, the White-crown is scarcely the inferior of the White-throat itself.

Its song very closely resembles that of the White-throated sparrow with which it is quite frequently seen during migration, yet the two songs when heard together are readily distinguishable. The usual song of the White-crown being somewhat similar to the latter part of the White-throat's refrain.

White-throated Sparrow: ***Zonotrichia albicollis*** t

PLATE 26. FIG. 2.

Length: 6.50–7 inches.

Male and Female: A plump, handsome bird. *White throat and crown stripes.* Back striped with black, bay, and whitish. Rump light olive-brown. Bay edgings to wings, and two white cross-bars; under parts gray. *Yellow spot before eye.* Female crown, brown, markings less distinct.

Song: Sweet and plaintive, — "Pee-a-peabody, peabody, peabody!"

Breeds: From [illegible]

Season: Earliest date of arrival May 1st, latest date of arrival May 26th, average date of arrival May 9th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout the whole of its Canadanrange.

Nest: A deep grass nest partly sunken in the ground or in a low bush.

Eggs: Variable, greenish, and thinly speckled with reddish brown to gray, blotched heavily with chocolate.

Range: Manitoba Saskatchewan and Alberta.

The scientific name of this bird is descriptive of the marked color characteristics of its crown and throat. Zontrichia means hair or crown bands, and Albicollis is from the Latin meaning white-throated. It is sometimes called Peabody bird especially by the New Englanders, with whom Peabody is an important traditional name, and they hear the bird say in its song "I-I-Pea-body, Pea-body, Pea-body. This reddering of its plantive song is a caricature, yet the name clings to the bird even in this locality.

This bird always says to me Oh! see, me, me, me. Oh! see, me, me, me, me, me, me. Uttered in a beautiful pleasing whistle

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The White-throat's song has been expressed in many different syllables. It certainly says, "Pee-a-peabody, pea-

body, peabody"; words from which it received the name of Peabody Bird.

Wilson Flagg says that the Maine folk interpret the notes as, "All-day, whittling, whittling, whittling." And then there is the evidence of Farmer Peverly, whom Hamilton Gibson interviewed, who, upon being perplexed and undecided as to the crop that he ought to sow in a particular field, understood the Sparrow to say, "Sow *wheat*, Peverly, Peverly."

You may take your choice as to the *words*, but pray notice that all these interpretations have the *same accented* value, and so equally imitate the song. This Sparrow also sometimes sings softly in the night, —

"* * * *
Nestling in his tree
The sleeping Sparrow
Dreams a melody."

WESTERN TREE SPARROW: Spizella monticola ochracea.

Length: 5.75–6.25 inches.
Male and Female: Bright bay crown. Gray stripe over eye, cheeks, throat, and breast. Dark brown back with feathers pheasant-like, edged with orange and brown. Wings dark brown with paler edgings and two white bars. Bill black above, lower mandible yellowish, feet brownish black.

Song: A sweet low whistling warble.

Season: Common as a migrant only. Earliest date of arrival March 20th, latest date of arrival April 28th, average date of arrival April 6th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: McCowanx states that sets have been taken at Whale River, Hudson Bay and Ft. Chimo Ungava.

Nest: Of grass, bark, and feathers; on ground, in a bush, or occasionally in a tree.
Eggs: 4–7, light green, finely sprinkled with reddish brown.

Range: Manitoba, Saskatchewan and Alberta during migration only.

The Tree Sparrow is the earliest arrival in the Spring often arriving in a severe snow strom as he did in the Spring of 1916. While walking along a lake on the 21st of March 1916 I heard several of these birds making their peculiar chirp and was very much surprised to see them at this early date as it was snowing very hard and the weather was xxx quite cold, they seemed very contented looking for their breakfast among the weed stocks and xxx last years stubble. I have found that they usually come between

comes to us as a very restless migrant in middle autumn and late spring, when it is occasionally seen feeding with Juncos and White-throats.

White-throated Sparrow: *Zonotrichia albicollis.*

Plate 26. Fig. 2

...nd Female. A plump, handsome bird. *White throat and crown ...stripes.* Back striped with black, bay and whitish. Rump light

two and three weeks before the opening up of Spring and I arrive about two weeks ahead of cold weather or snow in the Fall.

The Tree Sparrows are great weed seed destroyers consuming vast quanities of weed seed each Spring and Fall on their trips too and from their summer home, coming as they do in the early Spring and late Fall they do not destroy a very large quanity of insect matter.

CHIPPING SPARROW: Spizella passerina passerina.

PLATE 30. FIG. 2.

Length: 5–5.25 inches.
Male and Female: Dark chestnut poll, gray stripe over eye, brown stripe through it. Stripes along back, dark orange and brown. Wings and tail dust-brown. Under parts light gray. Young with some black streaks on crown. Bill black; feet light.
Song: An insect-like tremolo, varying a little in tone from a locust. Call note, "Chip-chip!"

Season: Earliest date of arrival May 4th, latest date of arrival May 21st, average date of arrival May 11th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Through the summer range in Canada.

Nest: In bushes and also high trees, made of fine grasses and lined with horsehair — hence the name, Hair-bird.
Eggs: 4, greenish blue, with dark brown speckles.

Range: This bird cannot be said to be common although it ranges throughout Manitoba, Saskatchewan and Alberta.

This is the precentor who, in early May dawns, gives the key on his little pitch-pipe and leads the chorus that makes four o'clock the most melodious hour of the day. T-r-r-r-r-r-r-r-r-r-r-r he trills from the ground, before even a Robin wakes, and then, as the music swells, he is lost in the harmony.

Who can fail to know the Chippy, whose mite of a gray-brown body is set off by a chestnut-coloured velvet cap, whose chirp, as he hops about the door craving crumbs, is as familiar as his pretty air of sociability. He has many little points of identity that separate him from the mazes of the Sparrow tribe. He seldom, if ever, nests upon the ground, and his nest, well built and carefully lined, is distinctive. Here in the garden he shows a preference for high trees; out of eight nests built last season within the garden limits, one was in a Deutzia shrub about three feet from the ground; four were in tufts of needles on the horizontal boughs of spruces, varying from eight to twenty feet high; and three were in white pines at distances of from twenty to forty feet from the ground.

I am inclined to think that the nesting-habits of birds are adapted by circumstances and their desire to locate in certain places. The Chippies like the protection and society of the house and build near it. Low bushes and undergrowth in this vicinity are limited, and the Catbirds usurp the most desirable shrubs. Not finding room below the Chippy ascends, as his fellow-men adapt themselves to the apartment house, so that from being ground-walkers they become "cliff-dwellers."

NELSONS SPARROW. Passerherbulus nelsoni nelsoni.

Length: 5.5 inches.

Male and female: Tail feathers sharply pointed, the outer ones shortest, below white, the breast and sides deep buffy, distinctly streaked with black, nape olive green, cheeks orange buff, crown olive chocolatex with a blue gray central line.

Song: A short unmusical twittering song.

Season: Earliest date of arrival May 14th, latest date of arrival May 26th, average date of arrival May 20th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout its Canadian summer range.

Nest: Composed of dry grassed usually built in a tuft of marsh hay a few inches above the ground.

Eggs: White ground color thickly speckeled with reddish brown, usually four or five in number.

Range: Manitoba, Saskatchewan and Alberta.

These birds are quite shy and are very difficult to approach, are usually seen in sloughs or among the low bushes on the edge of streams or marshes. Their coloring is very beautiful and they are very easy to identify. They feed considerable upon weed seed except attheperiod when they are feeding their young when they feed in true sparrow style upon soft insect matter thereby doing a great daal of good destroying insects which would in all probability be a pest of the farmer and fruit grower.

CLAY-COLORED SPARROW: Spizella pallida.

Length: 5.4 inches.

Male and female: Above grayish brown streaked with black sideof crown mostly black, a grayish line through its center; sides of head brownish; under part white.

Song: All the song that I can make out of this species is simply three notes and a trill.

Season: Earliest date of arrival April 30th, latest date of arrival May 25th, average date of arrival May 11th in Alberta. Possibly a few days earlier in Manitoba and Saskatchewan.

Breeds: Through its range in Canada.

Nest: On or near the ground composed of fine grasses and usually lined with horse hair.

Eggs: four to six, usually five, greenish blue with ~~xxxxxxx~~ dark brown speckles.

Range: Manitoba, Saskatchewan and Alberta.

The Clay-colored sparrow arrives through its range in Manitoba, Saskatchewan and Alberta about the middleof May In the open and semi-open park lands it is the most abundant sparrow we have, it feeds almost entirely upon weed seed except when feeding its young which are always feed on soft insect matter. This bird is therefore a double help to

the farmer for it destroys both weed seeds, which if allowed to grow would cause the farmer an untold amount of injury; also it destroys an innumerable number ofinsects which if allowed to live would ~~caused an untold amount of~~ injury to the farmers crops.

LINCOLN'S SPARROW: Melospiza lincolni lincolni.

Length: 5.7 inches

Male and female: A broad buff band across the breast; center of crown with a gray stripe, its sides striped chestnut and black; back grayish brown streaked with black and chestnut,below streaked with black except on middle of white belly. (Chapman)

Song: The song reminds one very forcably of the notes of the Purple Finch and House Wren. The call is a sharp chirp.

Season: Earliest date of arrival April 20th, latest date of arrival May 25th, average date of arrival May 5th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout its entire summer range.

Nest: On the ground, very much resembling that of the Song Sparrow.

Eggs: Four to five in number, greenish white ground color, heavily spotted and blotched with chestnut and gray.

Range: No records are to hand regarding the breeding of this species in Manitoba, although it may breed in some portions and will also probably be found breeding in Saskatchewan; it is a summer resident and breeds very abundantly in Southern Alberta.

These birds are about in equal numbers in central Alberta to those of the Song Sparrow but instead of nesting as the Song Sparrow does the nests that I have found have been located on high and dry ground at some distance from the water.

The song of these birds very much resembles that of the Song Sparrow at times, and at other times may be noticed to resemble that of the House Wren or Purple Finch.

They are also weed seed eaters, destroying great quantities of weed seed during their stay with us in the

summer, they also destroy great quantities of [illegible] during the nesting season as their young are feed almost entirely upon insect matter up to the time they leave the nest.

LECONTE'S SPARROW: Passerherbulus lecontei.

Length: 5 inches.

Male and female: Tail feathers pointed under ones much the longest, no yellow on the wing; a broad line over thex eye, the throat breast and sides are a rich buff; nape gray and chestnut, back black narrow -ly margined with chestnut and at the sides broadly with buff, sides streaked; breast rarely with a few streaks.

Song: Call a thin sharp, tweet, and a long drawn bizz, song a tiny husky, reese, reese. (Seton)

Season: Earliest date of arrival May 6th, latest date of arrival May 24th, average date of arrival May 12th in Alberta. Possibly a few days earlier in Manitoba and Saskatchewan.

Breeds: Throughout its summer range.

Nest Composed entirely of grasses usually placed in a tuft of hay on or near the ground.

Eggs: Three or four greenish white speckled with brown.

Range: Manitoba, Saskatchewan and Alberta northward.

These birds may be considered to be the less abundant of any of the common sparrows as they are very shy and some what difficult to approach. The ne ts are usually quite well hiden in last years grass and are somewhat difficult to locate. When flushed from the nest they usually creep along under the grasses and hide themselves as well a[illegible] possible for them to [illegible] until they are at some distance from the nest when they take wing and fly a short distance and perch upon a grass stem, weed [illegible], or any convenient perch which may be near. They like the true sparrows are weed seed eaters except during the [illegible] breeding season when the young are feed almost entirely upon insect matter.

SLATE-COLORED JUNCO: Junco hyemalis hyemalis.

PLATE 29. FIG. 2.

Length: 6–6.50 inches.

Male and Female: Dark bluish slate all over, except lower breast and belly, which are grayish white and form a vest. Several outer tail feathers white, conspicuous in flying. Female, with a more rusty cast and vest less distinct. Bill flesh-white, dusky at tip.

Song: A crisp call note, a simple trill, and a faint whispering warble, usually much broken, but not without sweetness. (Bicknell.)

Season: Earliest date of arrival March 21st, latest date of arrival April 16th, average date of arrival April 14th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Through its summer range.

Nest: On ground, Sparrow-like.
Eggs: 4–6, white, peppered with reddish brown.

Range: Manitoba, Saskatchewan and Alberta.

The Junco is one of the earliest to arrive of the migrating host which come from the south each Spring. Its average date of arrival in Central Alberta being April the 9th and unless these birds come across the mountains from the west in their migration northward; Manitoba and Saskatchewan records would be a few days to a week earlier than this date. They are one of our most abundant sparrows and can be seen in most any field especially those that border the swamps and low lands. These birds are quite often imposed upon by the Cow bird which deposits her eggs with those of the Junco and leaves the foster parent to rear the young. A few years ago a Junco built its nest under one end of my wood pile and even in that secluded spot the Cow bird located the nest and deposited her eggs. The Junco did not seem to notice the difference between the egg of the Cow bird and her own and took equal care of them all. In due time the Cow bird's egg hatched and by the time the Junco's eggs had hatched the Cow bird was so much larger than the Juncos that they were soon trampled to death beneath its feet, therefore instead of raising three or four very useful Juncos one paltry Cow bird was reared only to

leave its foster mother as soon as it was able to fly and glean its own living to join the flock of its own li[illegible]. I have seen this li'tle Junco at times carrying food to the young Cow bird when the Cow bird was considerable larger than the foster mother. It was with great difficulty that the Junco reached the food up to the mouth of the Cow bird;. I felt somewhat relieved after the Cow bird took itself off to shift for itself and the foster mother had a few moments for its own pleasure and recreation.

SONG SPARROW: Melospiza melodia melodia.

PLATE 30. FIG. 1.

Length: 6–6.50 inches.

Male and Female: Brown poll, somewhat striped. Above gray and brown, thickly striped. Gray stripe over eye; brown stripe each side of throat; dark stripes across upper breast, forming *a black spot* in front. Beneath gray, slightly striped. Bill dark brown; feet pale brown.

Song: "Olit, olit, olit, — chip, chip, chip, che-char, — che-wiss, wiss, wiss!" (Thoreau, "Walden.") "Maids, maids, maids, hang on your teakettle-ettle-ettle!" (A local interpretation. Thoreau, "Summer.")

Season: Earliest date of arrival April 3rd, latest date of arrival April 21st, average date of arrival April 12th in Alberta. Manitoba and Saskatchewan possibly a fe few days earlier.

Breeds: Throughout its summer range in Canada.

Nest: Location variable; on ground or in low bush.
Eggs: Grayish white, spotted, marked, and clouded with browns and lavender.

Range: Manitoba, Saskatchewan and Alberta.

The Song Sparrow is the darling among the Song-birds; the Goldfinch's gay coat, the Bluebird's confidential murmur, or the melody of the Thrushes cannot rival him in our affections, even though they may possess superior qualities.

Plain as his coat is, he carries his identity in the little black streaks that form two spots on his breast, and all the year we may hope to hear his simple domestic ballad. Thoreau says: "Some birds are poets and sing all summer. They are the true singers. Any man can write verses in the love season. We are most interested in those birds that sing for the love of the music, and not of their mates; who meditate their strains and amuse themselves with singing; the birds whose strains are of deeper sentiment."

This is the Song Sparrow. He is the most constant singer among our northern birds; he has other songs in his repertoire beside love-songs, even though he excels in these, his later efforts lacking their variety.

In July his song loses quality, and August heat drives him, somewhat discouraged, to moult in bushy seclusion, but does not wholly silence him.

"This bird honestly merits its title of Song Sparrow, for its bright, canary like lay is one of the most attractive voices of the Spring, and is familiar to manny that do not know the idenity of its author."

Song: A crisp call note, a simple trill and a faint whispering warble.

It is usually found along the water courses which are bordered with short scrubby brush and last years grasses. It usually seeks its food on the ground where it feeds upon weed seeds and insects. When first noticed running along the ground it reminds one very forceably of a mouse or other small rodent seeking shelter.

The Song Sparrow the same as a great many other sparrows live largely upon weed seed gleaned from the fields and meadow lands, and at the nesting season feeding their young upon insect matter.

"Taking the food habits of the Song Sparrow as a whole, it will be readily seen that this bird does much more good than harm and is worthy of protection and inouragement. Only two per cent of the food consists of useful insects, while 18 per cent is composed of injurous insects; and grain, largely waste, amounts to only 4 per cent, while the seeds of various species of weeds constitute 50 per cent."

Swamp Song Sparrow: ***Melospiza georgiana.***

Length: 4.50–4.80 inches.
Male and Female: Crown bright bay, gray stripe over eye and gray wash over brown around neck. Back striped with various browns. Tail reddish brown. Much bay on wings. Mottled gray below.
Song: A liquid though monotonous trill.

Season: Earliest date of arrival May 4th, latest date of arrival May 21st, average date of arrival May 13th in Alberta. Manitoba and Saskatchewan possible a few days earlier.

Breeds: Through its summer range in Canada.

Nest and Eggs: In tussock or bush in swamp, otherwise like Song Sparrow's; eggs also similar.

Range: Manitoba, Saskatchewan and Alberta.

The distinctive marks of the Swamp Song Sparrow are its *bright bay crown, bay wing-edges, and absence of any yellow washes,* or *white tail feathers.* The Chipping Sparrow has the bay crown, but lacks the bay on the wings; the Vesper Sparrow has the bay wings, but lacks the crown, but the Swamp Sparrow has both.

This Sparrow has neither the vocal powers or the sociability of the Song Sparrow. It is a shy bird that loves deep, cool thickets and haunts such places as bog, lake shores and muskegy swamps

his rather defiant song

He is a very r and though it is common in such places, when you look for it you will find it as elusive as the Veery and Marsh Wrens.

the moulting he only gives l ote and, being affe

FOX SPARROW: Passerella iliaca iliaca.

IC RAILWAY

Length: 6.50–7.25 inches.
Male and Female: *The largest and reddest of the Sparrows, the size of the Hermit Thrush.* Above red-brown, varying from dark to bright chestnut, brightest on rump and tail. Breast light gray, arrowhead markings on throat and breast, sides streaked with reddish brown. Bill dark above, lower mandible yellowish, feet pale.
Song: A sweet, varied warble, sometimes heard during migrations. Call note a feeble zip-zip.

Season: Earliest date of arrival April 10th, latest date of arrival May 30th, average date of arrival May 4th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Through its Canada summer range.

Nest: Usual Ground Sparrow nest.
Eggs: Greenish white, speckled with red-brown.

Range: Ranging from a migrant in Manitoba to a summer resident in Alberta.

This bird, whose fox-red feathers, and not a sly disposition, give it the name of Fox Sparrow, is a delightful songster as well as a large and boldly marked species. They come in flocks in very early spring, — when the Bluebird and Song Sparrow are sharing the musical honours, — and, settling on the pastures, send up a wave of gentle music, ~~and when they return in autumn they still give a few soft notes~~.

Mr. Bicknell has heard them sing as early as February 29 and as late as November 17. He says that this Sparrow seems indisposed to sing unless present in numbers. This probably applies only to the anti-nuptial song; for, as a rule, the *perfect* song of wild birds is not heard before they leave and after they rejoin the flocks, but only at the period when they assert themselves as individuals.

The Fox Sparrow is practically the sweetest singer in this locality. Six or seven years ago he was quite abundant in the central part of Alberta but during the past two or three years he has become scarcer until the past season I only observed one singing male; it is difficult to account for ~~this~~ their scarcity in late years.

Pipilo erythrophthalmus erythrophthalmus.

Chewink, Ground Robin.

PLATE 31.

Length: 7.50–8.75 inches.

Male: Head, neck, chest, back, and all but outer tail feathers black. Belly and spots on outer tail feathers white, sides light bay. Bill black; feet light brown.

Female: Drab or brownish where the male is black.

Song: Clear and ringing, "Tewéek—tewéek—towhee—blure—towhee blure!"

Season: Arriving early in May.

Breeds: Through the summer range.

Nest: On the ground; of grass, fibres, hair, etc.; large but well concealed by underbrush.

Eggs: White, heavily speckled with brown.

Range: Recorded as breeding in Manitoba and Saskatchewan. The [illegible] which breeds in Alberta is the Artic Towhee which ranges a[illegible] as far north as the north branch of the Saskatchewan.

In early May when the Thrushes are scratching in the shrubbery, a stranger appears among them, clad in bay, white, and black, who hops with such exaggerated precision that he seems like a messenger bearing important news. But it is only another of the Sparrow tribe, wearing the thick bill of the Buntings. He has probably been in the vicinity a week or two but has kept aloof. He bears the local name of Ground Robin, because he nests upon the ground and has partially reddish under parts.

Although common summer residents they are so shy that they are rarely seen after the breeding-season. If you approach the nest, the male will run through the bushes in an opposite direction, uttering his sharp "tewéek, towhee" (a note which suggested the name Towhee) and in his anxiety

[illegible] adds proof to a pet theory of my own, that the best a[illegible] music is made by the birds of [illegible] season.

Indigo Bunting: [illegible]*sserina cyanea.*

PLATE [illegible]

exposes himself fully to view. Late in the afternoon he mounts a tree, at some distance from his nest, and rings out his rather defiant song.

He is a very restless bird, prying about continually for seeds and insects, upon which he feeds equally, and in autumn he also eats such berries as he can glean. After the moulting he only gives his call note and, being affected by cold, leaves before hard frosts.

ROSE-BREASTED GROSBEAK. *Zamelodia ludoviciana.*

PLATE 33.

Length: 7.75–8.50 inches.

Male: Breast rose-carmine, which colour extends under the wings. Above black; belly, rump, three outer tail quills and two spots on wings white; white bill.

Female: Brownish, sulphur-yellow under wings; no rosy tint; heavy brown bill.

Song: A delightful, rolling warble, often heard toward evening.

Season: Earliest date of arrival May 5th, latest date of arrival May 30th, average date of arrival May 22 in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Through its Canadian range.

Nest: Where wild grape vines grow the nest is composed entirely of grape vine tendrils. In localities where grape vines do not grow, the nests are composed of small twigs with out a lining, being so thin and frail that the eggs can be seen through the bottom of the nest.

Eggs: Dirty green, with dark brown spots and speckles.

Range: Manitoba, Saskatchewan and Alberta.

You will always remember the day when you first see this Grosbeak. Its song may be familiar to you, though you are wholly unconscious of it; for in the great spring chorus you may mistake it for a particularly melodious Robin, who has added a few Oriole notes to his repertoire.

The Grosbeak's song, however, has a retrospective quality all its own, and shared by neither Robin or Oriole, — a sort of dreaminess, in keeping with its habit of singing into the night. Gibson says that its song is suffused with colour like a luscious tropic fruit rendered into sound.

The songster itself, if seen feeding, as it sometimes does, upon the grass, is a dark, clumsy-looking bird, with an awkward beak; and it is only when you look at it from beneath, as it perches in the trees, that you see the rosy shield and flush under the outspread wings.

One year while on an outing my friend and I observed the male ~~&~~ Rose-breast making love to his future wife, he would hang down his wings and elevate his tail and spread it out much in the fashion of a strutting turkey gobler all the time running up and down a log and uttering the sweetest music it has been my lot to hear this bird utter. During all of this preformance he puffed out the beautiful red spot on his breast as if to make it more conspicuous. At first we were at a loss to understand what he was doing but on closer observation we noticed the female Rose-breast perched on a twig a few feet above the performer and eyeing him critically. She must have been won by his love making for in a short time she flew down by his side, they rubbed their ~~xxxxxx~~ beaks together for a few seconds, he during this time uttering a very low sweet song, after this perfO-rmance they flew away and were lost in the gathering twilight.

The distribution of the Grosbeak is somewhat irregular; it will be common on one side of a river and rare on the other, or plentiful on both sides of a range of hills and unknown among the hills themselves. The song is continued well into August, but the bird is quite silent before leaving in September. Two or three years are required to bring the rose-coloured markings to perfection; but Mr. Bicknell once shot a young male on the 23, of September, whose breast was crimsoning, and who was in full song. This last fact adds proof to a pet theory of my own, that the best autumn music is made by the birds of the season.

FAMILY ICTERIDÆ: BLACKBIRDS, ORIOLES, ETC.

Bobolink: ***Dolichonyx oryzivorus.***

After moult Reed-bird.

PLATE 35.

Length: 6.50–7 inches.

Male: Black head, chin, tail, wings, and under parts. Buff patch on back of neck; also buff edges to some tail and wing feathers. Rump and upper wing coverts white. Bill brown. *In autumn similar to female.*

Female: Below yellowish brown. Above striped brown, except on rump, with yellow and white tips to some feathers. Two dark stripes on crown.

Song: A delightful, incoherent melody; sung oftentimes as the bird soars upward.

Season: Arriving early in May.

Breeds: Through the summer range in Canada.

Nest: A loose heap of twigs and grass on the ground in low meadows and hay-fields; common, but very difficult to discover.

Eggs: 4–6, clear gray, with clouds and markings of dark brown.

Range: Through southern Manitoba and Saskatchewan and possibly the southern part of Alberta. These birds are not so common as they were previously or in fact becoming rare, in certain localities at least.

The Bobolink, the bird of two lives in one! The wild, ecstatic black and buff singer, who soars above the May meadows, leaving a trail of rippling music, and in autumn the brown striped bird who, voiceless but for a metallic "chink," is hunted through the marshes by the gunners,

making his last appearance as an article of food, heralded on the restaurant bill of fare thus: "Reed-birds, four on a skewer, 50 cents."

Common summer resident;

Breeds: From the Middle States northward.

Nest: A perfect circle, neatly made of grass, lined with finer grasses, placed in a low tree, or more frequently a thorn bush in old pastures near the edge of woods.

Eggs: Dirty green, with dark brown spots and speckles.

Range: Eastern United States and southern Canada; west to the eastern border of the Plains; south in winter to Cuba, Central America, and northern South America.

You will always remember the day when you first see a Cowbird. Its song may be familiar to you, though

Strange to say that two-thirds of the gunners who do the shooting deny that the birds are identical and that they are killing so much latent music. "The brown birds are all females," they say, "which, being greatly in excess of the males, remain after the latter have disappeared." I would advise all such incredulous ones to buy *The Auk* (an intelligible ornithological quarterly) for October, 1893, where they will find a paper on this subject by Mr. Frank M. Chapman, and a coloured plate showing the Bobolink life-sized, in the spring transition, when he is again moulting the stripes for the breeding-coat.

Of all our songsters none enter into the literature of fact and fancy more fully than the Bobolink, and none so exhilarates us by his song. Sit upon the fence of an upland meadow any time from early May until the last of June, watch and listen. Up from the grass the Bobolinks fly, some singing and dropping again, others rising Lark-like until the distant notes sound like the tinkling of an ancient clavichord. Then, while you are gazing skyward, from the choke-cherry tree above your head will come the hurried syllables in which Mr. Burroughs interprets the song: "Ha! Ha! Ha! I must have my fun, Miss Silver-thimble, if I break every heart in the meadow, see, see, see!" Meanwhile, the grass is full of nests and brown mothers, neither of which you see, for you are wholly entranced by the song.

Bryant's poem on Robert of Lincoln contains a good description of the bird's plumage, but is too precise and measured to express the rapture of the song. It may describe a stuffed Bobolink, but never a wild, living one. Wilson Flagg's verses on The O'Lincon Family, one of which I quote, are in truer key: —

"Every one's a funny fellow; every one's a little mellow;
Follow, follow, follow, follow, o'er the hill and in the hollow.
Merrily, merrily, there they hie; now they rise and now they fly;
They cross and turn, and in and out, and down the middle and wheel about,
With a 'Phew, shew, Wadolincon; listen to me, Bobolincon!

Happy's the wooing that's speed[illegible]'s speedily done,
That's merry and over with the bloom of the clover;
Bobolincon, Wadolincon, Winterseeble, follow, follow me!'"

The prose writers vie with the poets in singing the Bobolink's praises, their own words turning to music under his spell. Listen to what Thoreau says of the song: "It is as if he [the bird] touched his harp with a vase of liquid melody, and when he lifted it out the notes fell like bubbles from the strings." . . . "away he launches, and the meadow is all bespattered with melody."

What matters it to us who hear his song in the north if the singer, in his migrations, is at war with the rice-growers of warmer regions? Here he is the peerless musician, whom no one should wittingly destroy; and yet we buy "Reedbirds, four on a skewer, for 50 cents."

COWBIRD: Molothrus ater ater.

PLATE 39. FIG. 1.

Length: 7.50–8 inches.
Male: Head, throat, and shoulders glistening dark brown; all other parts iridescent black. Bill dark brown; feet rusty black. A walker.
Female: Dull, brownish gray.
Song: A whistle and a few short, rasping notes. Call note, "Cluck-see!"

Season: Earliest date of arrival May 11th, latest date of arrival May 26th, average date of arrival May 19th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Through range.
Nest: Builds none, but lays its eggs at random in the nests of other birds, *usually choosing those of species smaller than itself.*
Eggs: Almost an inch long, white, speckled with brown and various shades of gray.

Range: Manitoba, Saskatchewan and Alberta.

The Cowbird is the pariah of bird-dom, the exception that proves the rule of marital fidelity and good housekeeping. It is the bird that you see so frequently in pastures,

(Form 91)

walking after the grazing cattle and feeding upon the insects dislodged from the grass by their cropping. Other birds build a home and seek a mate, often remaining with the same one a lifetime. The Cowbirds are polygamous, living in roving flocks, building no nests, and providing in no way for their offspring. When the laying impulse seizes them, they slyly deposit the egg in the nest of some smaller bird. This shows forethought, however; for there is less likelihood of the eggs being thrust out, and it also obtains a greater share of warmth than the other eggs in the nest and hatches more rapidly.

Many birds do not allow themselves to be so imposed upon, and either eject the strange egg, build a new nest over it, or abandon their nest entirely; others seemingly less intelligent will rear the ungainly stranger, even though from its greater size and appetite it crowds and starves the legitimate tenants of the nest. I have many and many a time seen a young Cowbird, after leaving the nest, being fed by a bird so much smaller than itself that the poor foster parent had to stand on tiptoe.

Cowbirds' eggs have been found in the nests of the Chat, Baltimore Oriole, Wood Thrush, Mourning Dove, Kingbird, Towhee, Vireos, Warblers, and all the Sparrows, and even in the secluded hut of the Ovenbird, while many nests are so unfortunate as to contain more than one of these eggs.

Vagrants as the Cowbirds are in the breeding-season, after the nesting the young do not continue with their foster parents, but return to the flocks of their progenitors, and remain with them. Thus these Cowbirds are the socialists among birds, and are like their human prototypes, who send their young to free kindergartens and mission schools that they may be fed and clothed at the expense of others; *then* drawing them surely back, with their inherited principles unchanged. Some evils are inextricably mixed up with the foundations of things.

Length: 10.75 inches.

Male and Female: Much variegated above, general colour brown. Bill stout and straight. Crown with brown and black streaks, black line behind eye. Tail black with white outer quills; wings edged with yellow. *Under parts mostly, black crescent on the ...*

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YELLOW-HEADED BLACKBIRD: Xanthocephalus Xanthocephalus.

Length: 10 inches.

Male: Black; head and breast orange yellow; outer wing-coverts white, blacked tipped.

Female: Brownish, line over eye, throat and breast dull yellow, lower breast streaked with white; ear-coverts rusty. (Chapman.

Song: Call, a hoarse chuck; song, a variety of hoarse gruntings, gutteral whistles; usually uttered with ~~eccarent~~ great effort and bodily contortion. The young utter a rolling whistling call. (Chapman)

Nest: Very much resembling those of the Red-winged Blackbird.

Eggs: 4 to 6 in number; grayish white ground color speckled and spotted with brown and gray.

Range: Through scattered districts of Manitoba, Saskatchewan and Alberta.

I first observed this species on a small lake about 30 miles west of Edmonton where a single pair nested.

The first that I observed it nesting in any numbers was at Wabamun Lake about 45 miles west of Edmonton and have not seem them in any other locality, although I have reliable information stating that they nest in abundance in the prairie part of the province and will probably also be found throughout the marshy districts of Saskatchewan and Manitoba.

These birds do not destroy any fruit or garden produce, but do considerable amount of good by destroying injurious insects and troublesome weed seeds.

XXXXX

THICK-BILLED RED-WING: Agelaius phoeniceus fortis.

PLATE 36.

Length: Very variable; 8.25-9.85 inches.
Male: Rich blue-black; scarlet shoulders, edged with yellow.
Female: Finely speckled with rusty black, brown, and orange. Shoulders obscurely orange-red.
Song: A rich, juicy note,—"Oucher-la-ree-é!"

Season: Earliest date of arrival April 7th; latest date of arrival May 2nd; average date of arrival ~~XXX~~ April 16th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Through summer range.
Nest: A bulky pocket hung between reeds or stems of alders, etc.; made of rush blades and grass, and lined with finer grasses.
Eggs: 4-6, light blue, fancifully marked with lines, dots, and patches of black and lilac.

Range. Manitoba, Saskatchewan and Alberta.

As a summer resident the Red-winged Blackbird is a familiar sight in low meadows and along roadsides. At a little distance he appears to be only a plain, black bird, but as he extends his wings his brilliant epaulets come into prominence. The plumage of the female, though inconspicuous, is singularly beautiful when seen at close range. It looks like a fabric of which the warp is black and the woof a twisted thread of brown and yellow. The Red-wings are essentially early birds, often returning in spring when their marshy haunts are still frozen over. Their vocalization is suggestive of cool, moist ground and hidden springs; it continues until late July, and is briefly renewed in October. The deep nest is half hung, half twined between the stems of marsh-growing plants, and often holds two broods of a season; the boggy location chosen serves to protect it quite thoroughly from human invaders.

This Blackbird's clear notes are associated with those of the Meadowlark, as they are both early singers and are found in similar places. They are useful birds to the agriculturist, as they are great destroyers of cutworms. They are sometimes polygamous, though as frequently seen in pairs; being very gregarious birds, many nests are usually found in the same locality.

WESTERN MEADOWLARK: Sturnella neglecta.

PLATE I.

Length: 10.75 inches.
Male and Female: Much variegated above, general colour brown. Bill stout and straight. Crown with brown and black streaks, black line behind eye. Tail black with white outer quills; wings edged with yellow. *Under parts yellow, black crescent on throat.* Strong legs, a walker. Female paler.
Song: Clear and piercing, — "Spring o' the Y-e-a-r!"

rump and edges of some tail feathers olive-
olive-yellow.
Baltimore Oriole, but less stout.

Season: Earliest date of arrival April 6th; latest date of arrival May 26th; average date of arrival May 10th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout its summer range in Canada.

Nest: Of dried grass; placed on the ground; usually concealed by a tuft of grass, which makes a partial roof.
Eggs: 4-6, brilliant white, speckled with purple and reddish brown.

Range: Manitoba, Saskatchewan and Alberta.

This abundant bird, ~~common in the migrations, and present with us all winter in considerable numbers~~, is not a Lark at all; it has superb plumage, and its song, though consisting of but a few syllables, is sweet and thrilling. Almost before a tinge of green has come upon the meadows, these birds are searching for worms and larvæ, which form a large part of their diet, and it is at this time that they show their yellow breasts, with the striking black crescent, to the best advantage. While they are feeding, they constantly give their calling song, varying the intonation and accent in a way which is very expressive — "Spring o' the *Y-e-a-r, Spring* o' the Year!" It has a breezy sound, as fresh and wild as if the wind were blowing through a flute. They sing from ~~March~~ until July, and then again after the moulting, though at this time they never equal their spring song, ~~and~~

These birds are highly insectiverous, destroying an innumerable quanity of injurious insects and also feeding largely on noxious weed seed. The amount of grain they eat is very trifling, it being grain gleaned from the fields after the harvest is in thus doing the farmer a favor in place of ~~doing a~~ damage. Their nests are located on the ground and are usually arched over making them very difficult to find.

Baltimore Oriole: ***Icterus galbula.***

Golden Oriole, Hang-nest, Golden Robin.

PLATE 38.

fellows. Many instances of his power of thinking have

Length: 8 inches.
Male: *Black head, throat, and upper half of back. Wings black,* with white spots and edges; tail quills spotted with yellow. *Everywhere else orange-flame.* Bill and feet slatish black.
Female: Paler, the black washed with olive. Below dull orange.
Song: Somewhat shrill and interrogative, but withal martial. In the breeding-season they have an anxious call, — "Will you? Will you really, really, truly?" Female's note a plaintive "I w-i-ll."

from the nest by the leg (for this little

Season: Earliest date of arrival May 20th; latest date of arrival June 1st; average date of arrival May 27th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

and pierced the poppy eyes with his slender beak in rapid

Breeds: Through range.
Nest: A pensile pocket, woven of milkweed, flax, fine string, or frayings of cotton, rope, etc.; suspended at the end of a swaying branch at considerable distance from the ground.
Eggs: 4–6, whitish ground, scrawled with black-brown.

like many highly coloured birds, he retains his brilliancy

Range: Manitoba, Saskatchewan and Alberta.

There is a bit of history as well as tradition connected with the naming of this splendid bird. George Calvert, the first Baron Baltimore, who penned the charter of settlement in 1632 of the country which now comprises the states of Delaware and Maryland (a grant which fructified later for the benefit of his son), is the subject of the tradition which still lingers in Maryland, and has sufficient facts for a foundation to be credible. The story says that Calvert, worn out and discouraged by the various trials and rigours of temperature in his Newfoundland colony, in 1628 visited the Virginia settlement. He explored the waters of the Chesapeake, with its noble tributaries and delicious climate, and found the shores and woods teeming with birds, and among them great flocks of Orioles, who so cheered him by their song and colour that he took them as good omens and adopted their colours for his own. Be this as it may, it is a likely story; for the Oriole has gone on cheering and charming mankind to this day.

The Oriole comes in full plumage and song in time to sing the praises of the blooming orchards, but if the season is cold and late and the cherries do not yield their mimic snow-storm, — my Lord Baltimore also delays his coming. When these Orioles first arrive the males are in the majority, and they sit in the spruces calling by the hour, with a lonely querulous note.

In a few days the females appear in force, and then the martial music begins, and the birds' golden trumpeting often turns to a desperate clashing of cymbals when two males engage in combat; for the Oriole has a temper to match his flaming plumage and fights with a will.

The next step is the selection of a nesting-tree. It must be tall with swinging branches to yield when the wind blows, and near enough to civilization to intimidate the Hawks.

Hush! 'tis he!
My Oriole, my glance of summer fire,
Is come at last, and ever on the watch,
Twitches the pack-thread I had lightly wound
About the bough to help his housekeeping, —
Twitches and scouts by turns, blessing his luck,
Yet fearing me who laid it in his way,
Nor, more than wiser we in our affairs,
Divines the providence that hides and helps.
Heave, ho! Heave, ho! he whistles as the twine
Slackens its hold; *once more, now!* and a flash
Lightens across the sunlight to the elm
Where his mate dangles at her cup of felt. — LOWELL.

If the situation is protected from birds of prey, the nest is made quite open at the top; but if it is in a wild and remote region, the structure is more bottle-shaped, with a small opening, which completely hides the sitting bird. This accounts for the great variation in the form of nests found in different localities.

The Oriole is a beneficent garden guest; his food is largely insectivorous, and he not only eats worms and grubs, but also strips cocoons of their latent mischief; so we will not begrudge him a few cherries for dessert.

He is a quick-witted bird, and a good neighbour to his fellows. Many instances of his power of thinking have come under my eyes, but none more forcible than an episode of last season. In June I was sitting under the trees, watching the evolutions of a pair of Redstarts, when a violent commotion in the shrubbery attracted me. Catbirds were screaming lustily, and Robins, Wrens, and Sparrows collected at the call in a body, while a gorgeous Oriole shot through the trees, close above my head. The cause of the rumpus was a chipmunk, who had dragged a young Catbird from the nest by the leg (for this little pest steals birds as well as eggs, though I have never seen them *eat* a bird). The troop of birds succeeded in frightening away the intruder, and I returned to my hammock, thinking no more of it. Not so with the Oriole. He silently watched the chipmunk, who sat chattering in a pine. Several minutes passed, and then the chipmunk ran out in full view on a long bough. Quick as a flash the Oriole darted at him, and pierced the poppy eyes with his slender beak, in rapid succession. The unfortunate chipmunk fell to the ground, and was put out of misery, while the Oriole flew off as if nothing unusual had happened, and was soon swinging and singing in the elm again, the type of summer fervour. Unlike many highly coloured birds, he retains his brilliancy after moulting, and also has a second period of song, which lasts from August until early September, when he leaves us.

RUSTY BLACKBIRD: Euphagus carolinus.

Thrush Blackbird.

Length: 9–9.50 inches.
Male: In breeding-plumage. Glossy black with metallic glints and a rusty wash. In autumn more decidedly rust-coloured. Bill and feet black.
Female: Deep rusty brown above, grayish below.
Song: Only a clucking call note.

Season: Earliest date of arrival April 9th; latest date of arrival April 22nd; average date of arrival April 16th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Through its summer range.

[illegible] it was exceedingly thrilling, and the lady to whom it was addressed so considered it.

It was the 15th of May, and the Grackle perched in my blighted old ash tree, displaying his glistening coat to the best advantage in the afternoon sun. The female was coyly hidden in the dogwood below him. Suddenly he spread his wings and tail, ruffled his breast, at the same

Nest: composed of twigs lined with grasses with a composition of mud.

Eggs: 4, colouring very variable, greenish blue to grayish white, mottled with brown.

Range: Manitoba, Saskatchewan and Alberta.

You may identify these inconspicuous Blackbirds by their pale, straw-coloured eyes, and the rusty wash that dims their feathers, also from the fact that in spring they arrive in single pairs and not in flocks like the Grackles, while in fall they travel in *small* flocks and mingle with the Cowbirds in the pastures.

A pair of these blackbirds nested in a small slough about a hundred, fifty yards from the house. I was watching them every day expecting, when the set was complete and the female began her incubation, to make a photograph of her on the nest. After the second egg was laid I was very much surprised, on hearing considerable of a fuss in that direction, to see a blackbird being carried away by a Goshawk which proved later to be the female which belonged to this nest.

Some four or five days later I was somewhat surprised to find what I took to be the male belonging to this nest returned from an absence of a few days bringing with him wife No. 2 . This time they did not build on the edge of the open slough but secreted their nest very cleverly in a spruce tree some 150 yards to the south in the deep woods; this time the brood was raised without any further disturbance.

BRONZED GRACKLE: Quiscalus quiscula aeneus.

Crow Blackbird.

PLATE 39. FIG. 2.

Length: 12–13.50 inches.

Male and Female: Glossy metallic black, iridescent tints on head, tail, and wings. Iris bright yellow, tail longer than wings, feet black. Female more dull and smaller.

Song: A crackling, wheezy squeaking; call note a rasping chirp.

Season: Earliest date of arrival April 7th, latest date of arrival April 24th, average date of arrival April 19th in Alberta. Possibly a few days earlier.

Breeds: Throughout the summer range.

Nest: A carefully built nest of rather miscellaneous materials, mud-lined, usually in trees, sometimes in a hollow tree. In evergreens in many localities but never here, orchards being their favourite spot.

Eggs: Indescribable, different sets wholly unlike; the average groundwork soiled blue or green, waved, streaked, and clouded with brown.

Range: Manitoba, Saskatchewan and Alberta.

The most familiar of the Blackbirds as well as the most persecuted. Hated by the farmer for the alleged destruction of corn-fields while even at the harvest season, they rid the soil of noxious insects and grubs and all the rest of the year are either harmless gleaners or beneficial scavengers, their gravest fault being that they sometimes destroy and eat the eggs of other birds.

In May of last year I had the pleasure of watching a fine male Grackle sing his ludicrous love-song. Ludicrous from my point of view, though doubtless from a Grackle's standpoint it was exceedingly thrilling, and the lady to whom it was addressed so considered it.

It was the 15th of May, and the Grackle perched in my blighted old ash tree, displaying his glistening coat to the best advantage in the afternoon sun. The female was coyly hidden in the dogwood below him. Suddenly he spread his wings and tail, ruffed his breast, at the same time rising on tiptoe, like a melodramatic tenor, and uttered a high squeak expressive of his deep emotion. I expected that the female would fly away in disgust, but no, at each outburst she crept nearer and nearer and finally ventured upon the same branch that held the frantic singer.

These birds are very numerous ~~in~~ throughout their range, nesting either in the open trees as is the habit of the Robin or in excavations made by the Flicker or other excavations large enough for the Blackbird to enter and construct her

nest. Also in natural tree cavities. I have also found them nesting at the top end of a burnt stub which had no protection whatever from the sun's rays nor from the attack of ~~any~~ hawks or owls which may happen to be in their vicinity.

X) BREWER's BLACKBIRD: Euphagus cyanocephalus.

Length: 10 inches

Male: Whole head violet-pupple, rest of plumage bright [illegible]

Female: Greyish brown, throat paler, wings and tail greenish-black; no rusty. Winter plumage with bright grayish brown edgings to the feathers of the inetrior part of the body. (Chapman)

Note: Chack and a loud, shrill whistle. (Bailey)

Season: Earliest date of arrival April 10th, latest date of arrival April 24th, average date of arrival April 19th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout the summer range.

Nest: On or near the ground.

Eggs: Three to five in number [illegible] variously speckled and spotted and somewhat darker than those of the Rusty.

Range: Manitoba, Saskatchewan and Alberta.

The United States biological survey states that the vegetable food of Brewer's Blackbird is preeminently grain which amounts to over half of the total of the food taken while all other vegetable food amounts to only 7.9 per cent. Although but little testimony is at hand concerning the food of the [illegible] Blackbird, it is definately seen that no order is especially sought of insects except, grasshoppers, which constitute more than half of the animal food.

In spite of this apparently discreditable record, complaints of this blackbird have been fewer than several other specie

while, on the other hand, some observers speak highly of it. Prof. J.Cook, of Claremont, Calif. says that he considers it one of the most valuable species in that state.

It is possible that the large amount of grain found in the stomachs consists of gleanings from the harvested fields, corals, and other places; but even if this be true, a bird with such a pronounced taste for grain would, if abundant, always be a menace to ripening crops.

These birds are not so numerous in Manitoba, Saskatchewan and Alberta as to make them a serious menace to the farmer.

BLUE JAY Cyanocitta cristata cristata.

PLATE 40.

Length: 11–12 inches.
Male and Female: Lead-blue above, head finely crested, a black collar uniting with some black feathers on the back. Below grayish white. Wing coverts and tail a bright blue barred transversely with black.
Song: A whistling bell note in the breeding season, the usual cry a screaming "Jay, jay, jay!"
Season: Resident.
Breeds: Through range.
Nest: Bulky, in appearance like that of the Crow, but only one-quarter the size.
Eggs: 5–6, about an inch long and broad for the length, brownish gray, with brown spots.

Range: Wooded portions of Manitoba, Saskatchewan and Alberta.

When you see Jays in small flocks circling the trees in early spring and gathering their crop of chestnuts in the fall and acorns in early winter, you admire their brilliant colouring, jaunty crest and bold flight, merely wishing perhaps that their cry was less harsh.

But how do these birds amuse themselves in the period between April and September, in their breeding and moulting season, when they are comparatively inconspicuous, for

they go into the woods to breed and become almost silent, — it is a case of still waters running deeply? Day by day they sally out of their nesting-places to market for themselves and for their young, and nothing will do for them but fresh eggs and tender squabs from the nests of the Song-birds; to be followed later by berries, small fruit, and grain. There are birds that have all the domestic virtues coupled with personal beauty and interesting habits; birds who are of benefit to general agriculture, but still make themselves very unwelcome in the home woods or about the gardens of the lovers of Song-birds. Of this class the Jay and the Crow, fellow members of one family, are conspicuous examples, the Crow of course lacking the attribute of beauty.

It is interesting to be assured by Mr. Beal's report[1] that "19 per cent of the Blue Jay's food consists of harmful insects . . . and that the habit of robbing the nests of other birds is much less common than has been asserted." Nevertheless, that these birds raised sad havoc in my garden while they lived in a neighbouring thicket, I know by sad experience, and I personally prefer administering poisonous beverages to the various insects that enjoy garden rambles, than to be assisted in their destruction by this azure-plumed, jeering bandit.

Nor does the fact that Jays make devoted parents, excuse their audacity. The Robber Barons were doubtless liberal enough inside their own castles, where the tribute from other homes gave the baby barons the wherewithal to wax fat and ferocious. I speak from the view point of the homekeeper and gardener whose first thought is for the Thrush, the Robin, the Catbird, and all other friendly tenants of bush and hedge.

[illegible]AY: Perisoreus Canadensis canadensis.

[illegible] 11.[illegible] Female.

[illegible] Female: Black of hind head reaching to back of [illegible]

Sub-family Corvinæ: Crows.

American Crow: *Corvus Americanus.*

Length: 18–20 inches.

Male and Female: Glossy black, with a purplish tinge. Wings which appear saw-toothed when flying. Bill and feet black. Female a less brilliant black.

back, wings and tail gray; belly lighter; throat white; forehead buffy white. (Chapman)

Song: Most any mocking note. Call note usually a whistling sound.

Season: Resident.

Breeds: Throughout range.

Nest: Composed of twigs, fine mosses, etc, very compactly made and warmly lined with feathers.

Eggs: Three to five in number, yellowish gray spotted and blotched with brown and grayish.

Range: Manitoba, Saskatchewan and Alberta.

These birds are quite common through the wooded portions of their range, during the Winter time especially, all that is needed to call them to you is to make a squeeking sound like that of some rodent in distress, or discharge a gun when the jays think that some game is about to be divided up and they are there on the spot in a short time looking for their share. These are very social birds during the Winter season and will continuously come for their share of crumbs which is thrown from the door, or pieces of suet which you may tie upon a twig for them and the Chickadee's.

These birds are great mockers; several years ago I was tramping through the bush when I heard a very beautiful song which reminded me of the Purple Finch but knew it was impossible for it to be that bird in the middle of Winter; approaching quite cautiously I observed a Canada Jay sitting on a twig in the sunshine warbling away to himself as though it was Spring time and he was singing to his mate.

This bird has several local names; among them being; "Whiskey Jack","Whiskey John", "Moose Bird","Camp Robber" etc.

Young birds are considerable darker than the old ones, not having the light markings about the head their parents have; I have seen fully fledged birds the latter part of March and have found their nests when the snow was four feet deep and the thermometer registered 40 degrees below zero.

...ing within a short distance of the cabin in which I ... staying and desiring to get a photograph, I decided to attempt to photograph ~~them~~ the female on the nest. I approached the nest very cautiously having first put extra legs on my tripod to make it tall enough to make a photograph at close range. At first I was somewhat afraid that I would not be able to make her while sitting on the nest; but after working very cautiously for some time she allowed me to approach to within a few feet of her without showing ... signs of distress, ~~and~~ before I finished the photograph approached close enough to smooth down her feathers and ... the straw from under one of her wings and made a time exposure.

Corvus brachyrhynchos brachyrhynchos.

Length: 18–20 inches.
Male and Female: Glossy black, with a purplish tinge. Wings which appear saw-toothed when flying. Bill and feet black. Female a less brilliant black.
Song: A quavering "Kar-r-r-er-r!" in spring. Call note, "Caw-w!"

Season: Earliest date of arrival March 28th; latest date of arrival April 12th, average date of arrival April 5th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout the summer range.

Nest: Consisting of a platform of coarse sticks, upon which rests the nest proper, made of smaller twigs and deeply lined with cedar bark. Tall trees are chosen; preferably evergreens.

Eggs: 4–7, greenish ground, stained and spotted with brown; variable both in size and colour.

Range: Manitoba, Saskatchewan and Alberta.

The Crow is quite numerous throughout its range in the semi-open regions or in any locality where it can find a suitable nesting site. They are not numerous enough

throughout their range in Canada to be considered [illegible] to the crops but in some localities are considered to be a worse pest to the poultry raiser than all the [illegible] combined.

During the Spring of 1911 I noticed after the crows returned in the Spring that they uttered a peculiar cooing sound not unlike that of the domestic pigeon, I have never heard this note before or since.

From the standpoint of the agricultural economist, however, the Crow seems to be pronounced not guilty, or at least not wholly as black as he usually appears to the naked eye of the casual observer. The white feathers claimed for him are the May beetles, June bugs, grasshoppers, cutworms, caterpillars, mice, etc., that he consumes in off seasons, when corn is too hard to suit him and nests are empty.

Be this as it may, we must be allowed to regard birds somewhat in an æsthetic light, we are not all interested in cataloguing the contents of birds' stomachs, and no one will deny that the average Crow (of course there may be abnormal and angelic exceptions) is a coward, with a hoarse voice and disagreeable manners added to a most offensive, crouching personality hiding a world of cheap craft. In fact, a sort of feathered Uriah Heap, whom we do not desire for a near neighbour, though there may be people and communities where he is appreciated.

PRAIRIE HORNED LARK: Otocoris alpestris praticola.

Length: 7-7.50 inches.
Male: Upper parts brown with a pinkish cast, most marked on neck and rump. Black crescent on breast; black bar in front of head, extending to side of head, forming two tufts or horns; frontlet, throat, and neck pale yellowish; below whitish, streaked with black; bill dark; feet black.
Female: Paler and somewhat smaller.
Song: Only a call note here, but a charming song in the breeding-haunts.

Season: Arriving throughout its range about the first of

Breeds: Through its summer range

Nest: Of grass, in ground hollow.
Eggs: Variable, greenish white or gray, heavily marked with dark gray.

Range: Manitoba, Saskatchewan and Alberta and northward.

It is not the purpose of the revisor of this book to enter into any hair splitting arguments ragarding species and sub-species of any of the forms of birds found in Canada. The Canadian Catalouge of birds states that the Prairie Horned Lark breeds freely in the open prairies of Manitoba. That the Desert Horned Lark is found in Saskatchewan.

Specimens from Alberta show that this species migrating through that province belong to the sub-species known to the scientiests as Hoyt's Horned Lark; therefore it is very difficult to give a definite limit or breeding space to any of these forms, suffice it to say that any of these forms may be considered, from a popular stand point, that of the Prairie Horned Lark.

The food of the Horned Lark is largely weed seed; some of the weeds eaten are bind-weed, fox-tail, ragweed, pigweed etc., which shows that the Horned Larks are among the most efficient weed seed destroyers. The insect food of this bird includes such pests as [illegible] and their larvae, the white grubs, leaf beetles injurious to strawberries, and many other insects which are injurous to the gardener and orchardist. The proportion of animal matter in the diet of nestlings is about 4 times as large as that of the adult. In the nesting state, therefor, Horned Larks are almost entirely beneficial and the number of insect pests they consume is very great.

Eastern

ORDER PASSERES: PERCHING BIRDS.

SUB-ORDER CLAMATORES: SONGLESS PERCHING BIRDS.

FAMILY TYRANNIDÆ: TYRANT FLYCATCHERS.

Kingbird: ***Tyrannus Tyrannus.***

Bee Martin.

PLATE 41.

Length: 8 inches.

Male and Female: Above black, orange-red streak on poll. Beneath grayish white, darkest on breast. Tail terminating in a white band.

Bill and feet black.

Note: A piercing call note, — "Kyrie-K-y-rie!"

Season: Earliest date of arrival May 20th; latest date of arrival May 26th; average date of arrival May 23rd in Alberta, Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout its summer range.

Nest: Bulky and deeply cupped, made of sticks and grass, lined with matted fibres, usually in a conspicuous position on a horizontal branch in orchards or thin woods.

Eggs: Nearly an inch long and almost round, cream or bluish white, boldly scratched and spotted with brown and lilac. Very handsome and richly coloured.

ground-beetles, etc., but later in ... pastures, and very little

Range: Manitoba, Saskatchewan and Alberta.

... in general.

That the Kingbird — the second largest of our Flycatchers — is a tyrant, as his Latin name indicates, no one will doubt who has watched his tactics for a single day. He is born a fighter; he fights for his mate, he fights to protect his nest, and when he cannot find an opponent he emulates Don

Quixote. His greatest tyranny is over the ravenous insects that he holds so well in check; and the clumsy Crows and Hawks he drives at will.

Look at him as he sits motionless on the top wire of the fence, resting from an aerial excursion. He is easy to identify, for his grays and blacks are so distinct and the clear white tail band is decisive. Suddenly he dashes into the air or sweeps above the ground and secures an insect with a sharp snap of the beak, — a drone bee, perhaps, although the bees that he captures are comparatively few, — and returns to the precise spot from which he started. This is a habit peculiar to the Flycatchers. I once watched a Kingbird for nearly two hours, his point of vantage being a rail and wire fence between low meadows, and, though he would sail many hundred yards away, he always returned to his original perch. If a Crow or Hawk appears ever so far in the distance, he gives his shrill alarm note and goes in instant pursuit; and lucky is the chicken yard that has a pair of these gallant knights at hand and the garden that shelters them.

He does not seem, however, to care to cross swords with the Catbird, not, perhaps, that he is absolutely afraid, but he becomes suddenly near-sighted when that cunning musician crosses his path. Dr. Abbott once tested the valour of a particularly saucy Kingbird, by sending up a red and yellow bird kite in the vicinity of its nest, pulling the kite backward as the bird advanced and then when he was close upon it slackening the string so that the Kingbird, unable to check itself, plunged through the paper and bolted off, not returning for many hours, doubtless because his enemy was intangible, and not from fear.

Kingbirds make most devoted parents, and the young birds are delightful little things to watch as they develop if you are as fortunate in finding a nestful as was Mrs. Olive Thorne Miller, who has recorded their ways for all bird-lovers present and future in her "Chronicle of Three Little Kings."[1]

Opinions differ as to the Kingbird's bee-destroying proclivities, for which he received the name of Bee Martin;

neighbouring farmers even tell different stories, — one having assured me that last year his hives were impoverished.

while the other, an equally successful apiarist, says that he has never suffered any appreciable loss from this bird. They are said to take only drones.

Phœbe: ***Sayornis phœbe.***

Water Pewee.

PLATE 42. FIG. 1.

Length: 6.75–7.25 inches.

Male and Female: Above deep olive-brown; straight black bill. Outer edges of some tail feathers whitish; an erectile crest. Beneath dingy yellowish white; feet black.

Note: "Phœbee, phœbee, pewit, phœbée!"

Season: Earliest date of arrival April 17th, latest date of arrival April 26th, average date of arrival April 20th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout its summer range.

Nest: In its native woods the nest is of moss, mud, and grass bracketed on a rock, near or over running water; but in the vicinity of settlements and villages, it is placed on a horizontal bridge beam, timber supporting porch or shed.

Eggs: Pure white, somewhat spotted.

Range: The Canadian Catalogue of Birds, on the authority of Mr. Seton, states they are a rare summer resident in Manitoba; no record for Saskatchewan is given. I find these birds quite common in Central Alberta and Preble states that he observed species as far north as Ft. Chipewyan.

The cheerful Phœbe, the first to come and the last to leave of its tribe, can be distinguished by its sociability as well as its musical cry. To those who are familiar with the domestic Phœbe, who builds his bulky moss nest at their very door, and who associate him with the Wren in his love of nooks in the outbuildings, it will seem strange to know that in his primitive state he haunts dim woods and running water. The domesticated Phœbe is a great bather, and may be seen in the half-light dashing in and out of the water as he makes trips to and from his nest.

CANADIAN EXPRESS COMPANY

(Form 91)

Breeds: From the Carolinas northward.

Nest: In its native woods the nest is of moss, mud, and grass bracketed on a rock, near or over running water; but in the vicinity

These birds usually rear two broods during the season providing they are left to do it in peace. The history of a ~~Eve~~ Phoebe ~~nex~~ which nested in some old out buildings along the edge of a lake near my home is somewhat different from this. First she built her nest under the eaves of a small house which covered the entrance of a root celar. This for some reason was deserted after it was about half completed. Next she constructed a nest on the edge of a log near the top of an old chicken house where she deposited two eggs then unceremoniously left them to their fate. She next built her nest under the eaves of the house in which I was living, finished the nest completely ~~and~~ deposited four eggs and sat on them for about three or four days. Then she left them and returned to the chicken house where she built a nest over the floor; when this nest was about half completed she changed her mind again and built another nest in the roof of the chicken house and deposited four eggs in it, hatched them all and reared her young. Why she changed her mind ~~as~~ after deserting her previous nests I was unable to discover.

OLIVE-SIDED FLYCATCHER: Nuttallornis borealis.

Length: 7.50 inches.
Male and Female: Dark brown, deepest on head, olive-gray sides. Wings brown, with some white tips. Chin, throat, and centre of breast yellowish white. Bill, black above, yellowish below. Feet black.
Note: "O—wheo, O—wheo, O—wheo!"

Season: Arriving throughout its range about the latter part ~~xxxxx~~ of May.

Breeds: Throughout its summer range.

Nest: Made of small twigs, grass, and fibres; very crude and shapeless; saddled on a high horizontal branch.
Eggs: 4-5, buff-white, spotted thickly with reddish brown.

Range: Manitoba, Saskatchewan and Alberta.

"Like all Flycatchers, their food consists almost exclusively of winged insects, such as Beetles, Butterflies, Moths, and the numerous Gadflys which abound in the places frequented by these birds. A dead limb or the decayed top of some tall tree giving a good outlook close to the nesting site, is usually selected for a perch, from which excursions are made in different directions after passing insects which are often chased for quite a distance. This flycatcher arrives at its breeding grounds the latter part of May, and its far-reaching call notes can then be heard almost constantly in the early morning hours and again in the evening.

The nest is a well built structure, outwardly composed of fine wirey roots and small twigs, mixed with green moss and lined with fine roots and moss. It is securely fixed among a mass of fine twigs growing out at that point of the limb.

As a rule the nest is placed at a considerable height from the ground, usually from forty to sixty feet, though occasionally one is found not more than twenty feet.

In spite of their pugnacious and quarelsome habits, these birds are so attached to the localities they have selected for their home that they will usually lay a second set of eggs in the same nest from which their first set has been taken"

WOOD PEWEE: Myiochanes virens.

PLATE 42. FIG. 2.

Length: 6-6.50 inches.

Male and Female: Dusky olive-brown above, darkest on head, throat paler, middle of belly yellowish, growing lighter below. White eye ring and two whitish wing bars. Feet and bill dusky or black.

Note: "Pewee-a,—peweeà, peer!"—as much a song as that of many birds classified as Song-birds.

Season: Earliest date of arrival May 15th; latest date of arrival May 26th; average date of arrival May 21st in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout its summer range.

Nest: Flat; its evenly rounded edge stuccoed with lichens like that of the Hummingbird; hardly to be distinguished from the bough on which it is saddled.

Eggs: Creamy-white, with a wreath of brown and lilac spots on the larger end.

Range: Throughout ~~Xonxtonax~~ the wooded portions of Manitoba Saskatchewan and Alberta.

The Wood Pewee will be the form seen in Manitoba while probably the Western form of the Wood Pewee will be found in Saskatchewan and Alberta. The difference is very slight between these forms and in reality need no hair splitting distinction for any one not desiring to enter into the scientific study of the bird. They are quite common in the wooded and semi-wooded portion of their range; usually building their nest from ten to thirty or forty feet up; sometimes placing them on a dead limb or even placing them on the limb of a dead tree, and from this vantage point it is quite easy for them to observe any passing insect and dart out and devour them or return with them and eat them at leasure from their perch, or feed them to their nestlings. These birds are entirely insectivorous, devouring enormous numbers of injurious insects which if let live would be a great pest to the farmer and fruit grower and would also destroy a great number of forest trees.

Alert and swift of motion, he still wears an air of mystery, and his pathetic note seems like the expression of a hidden sorrow. Trowbridge's poem telling of his woodland search for the Pewee is one of the most charming bird epics we have, and the verse describing its plumage and song is the bird's life history told in a few lines,—

nests, both old and young repair to a maple near the pool

"I quit the search, and sat me down
Beside the brook, irresolute,
And watch a little bird in suit
Of sombre olive, soft and brown,
Perched in the maple branches, mute;
With greenish gold its vest was fringed,
Its tiny cap was ebon-tinged,
With ivory pale its wings were barred,
And its dark eyes were tender starred.
'Dear bird,' I said, 'what is thy name?'
And thrice the mournful answer came,
So faint and far, and yet so near,—
'Pewee! pe-wee! peer!'"

Least Flycatcher: *Empidonax minimus.*

Length 5–5.50 inches.

Male and Female: Olive-gray, brightest on the head, paler on wings and rump. Whitish eye ring, and wing-bars. Breast whitish, growing more yellow toward vent. Bill dusky. Feet black.

Note: "Che-bec! Chebec!" (Coues.)

Season: Earliest date of arrival May 14th; latest date of arrival May 23rd, average date of arrival May 18th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout the summer range.

Nest: In *upright* crotch of tree or bush, substantial and well cupped. Materials varying with the location, plant fibres and weeds, lined with down and sometimes horsehair.

Eggs: Usually unmarked, occasionally faintly spotted.

Range: Manitoba, Saskatchewan and Alberta.

The least of his tribe, the mite, whose olive poll is seen in great numbers darting about the orchard in May and again in late September when the decaying fruit attracts numerous insects. He is abundant, useful, and sociable, though neither possessing gay feathers nor a single musical note, yet he fills his own corner, doing his part in helping man to keep the upper hand over the insect world. These Flycatchers are solicitous parents and, as a rule, show great affection for their young, becoming almost frantic if the nest is approached.

These birds are quite common throughout the wooded and semi-wooded portions of their range, constructing their nests from six to twenty five or thirty feet from the ground. The nests are usually very compactly built and very much resemble those of the Yellow Warbler and the Redstart although they may be somewhat smaller.

ORDER MACROCHIRES: SWIFTS, WHIP-POOR-WILLS, ETC.

FAMILY CAPRIMULGIDÆ: GOATSUCKERS.

Season: Late April to September. Common [illegible]

WHIP-POOR-WILL: Antrostomus vociferus vociferus.

Length: 9–10 inches.

Male and Female: A long-winged bird of the twilight and night. Large mouth fringed with bristles. Plumage dusky and Owl-like, much spotted with black and gray. Wings beautifully mottled with shades of brown; lower half of the outer tail quills white in the male, but rusty in female.

Note: "Whip-poor-will, whip-poor-will;" repeated usually five times in succession, followed by a jarring noise during flight.

Season: Arriving the first part of May.

Breeds: Through its summer range.

Nest: Builds none, but substitutes a mossy hollow in rock or ground.

Eggs: 2, creamy-white, freely marked, and spotted with brown.

Range: Manitoba.

This weird bird, with its bristling, fly-trap mouth, who sleeps all day and prowls by night, comes to us late in April, if the season is warm, clamouring and waking strange echoes in the bare woods, and in early September, mute and mysterious, he gathers his flocks and moves silently on, for the Whip-poor-will has not at any time even a transient home to abandon; like the pilgrims of old, the earth is his only bed.

Many people are familiar with the cry who have never seen the bird itself; for Nature has taken great pains to blend the colours of its plumage with the browns and grays of the bark and rocks of the forest, and has given it the unusual habit of sitting lengthwise on the branch when it perches, so that it is invisible from below, and so closely resembles the branch against which it is so flattened as to escape notice.

The Whip-poor-will prefers the forest solitude, but in his nocturnal flights he often comes near houses, and sometimes calls close to a window with startling vehemence.

The breeding-habits of this strange bird are not the least of its peculiarities; when the ground-laid eggs are hatched, they are beset by many dangers from weasels, snakes, etc., but the young birds are almost invisible to the human eye, even if their location is known. The female is very adroit, and if she thinks her family has been discovered she will move them to another place, carrying them in her mouth as a cat does kittens. In fact, the Whip-poor-will is well protected both by nature and superstition; the farmer knows its value as an insect-destroyer, and the idle mischief-loving class, who kill birds from pure wantonness, give it a wide berth, as being the possessor of some occult power, akin to the "evil eye," and associate its sudden cry with death or calamity.

...28 are hatch...

NIGHTHAWK: Chordeiles virginianus virginianus.

Night-jar.

PLATE 44.

Length: 9–10 inches.

Male: Mottled black and rusty above, the breast finely barred, with a V-shaped white spot on throat. Wings brown and large, *white spot extending entirely through them, being conspicuous in flight*: white bar on tail. In the female, the white markings are either veiled with rusty or absent.

Note: A skirling sound while on the wing, — "Skirk — S-k-i-rk!"

...'s eye," ...ociate its sudden cry with death or ...

Nighthawk: *Chordeiles virginian...*

Night-jar.

...4.

9-1... ...8
...ottled black and ..., the breast finely barred ...
...r V-shaped white spot on t... Wings brown and large ...

Season: Earliest date of arrival May 20th, latest date of arrival June 2nd, average date of arrival May 30th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout the summer range.

Nest: No nest constructed; eggs deposited on the bare ground.

Eggs: 2, of variable shades of gray latticed with olive.

Range: Manitoba, Saskatchewan and Alberta.

Another bird of the twilight, feeding bat-like upon the insects obtained in the air. It is most conspicuous in the late afternoon, though it flies also by day, and may be distinguished from the Whip-poor-will, which it closely resembles, by the *large white wing spots*. After dark its cry will easily identify the Nighthawk, for, instead of the distinct syllables of the Whip-poor-will, it gives a peculiar harsh whistling note, while on the wing, which is followed every few minutes by a vibrating sound, as if a fully charged telegraph wire was struck with a bit of metal; or, as Nuttall describes it, "a hollow whirr, like the rapid turning of a spinning wheel, or a strong blowing into the bung-hole of an empty hogshead, which is supposed to be produced by the action of air in the open mouth of the bird." In the latter conjecture he was wrong, as the jarring sound, which gave the bird the name of Night-jar, is now conceded to come from its habit of dropping suddenly through the air, thus making a sort of stringed instrument of its pinions.

The Nighthawk has the Whip-poor-will's habit of laying its eggs on a bare surface, only it chooses open fields and waste pastures, or even flat roofs of city houses, instead of the woods. The term *Hawk*, as applied to it, is an entire misnomer; it is in no sense a bird of prey, and subsists entirely on insects, and the stories told of its chicken-killing propensities are wholly unfounded. In early autumn, prior to the migration, the Nighthawks gather in enormous flocks and fly about the entire afternoon, when they may be distinctly seen.

FAMILY MICROPODIDÆ: SWIFTS.

Chimney Swift: *Chætura pelagica.*

Chimney Swallow.

PLATE 45.

Length. 5.25 inches.

Male and Female: A deep, sooty brown. Wings longer than the tail, which is nearly even, the shafts of the quills ending in sharp spines.

Note: A loud, Swallow-like twitter.

Season: Arriving in the early part of May.

Breeds: Throughout its summer range.

Nest: A loose, twig lattice glued by the bird's saliva, or sometimes tree-gum, to the inside of chimneys; or in wild regions to the inner walls of hollow trees.

Eggs: 4-5, pure white, and long for their width.

Range: Manitoba, Saskatchewan and Alberta to the United States in winter.

This bird, popularly known as the Chimney Swallow, but which is more closely related to the Nighthawk, may be easily distinguished from the Swallows when flying, by its short, blunt tail. You will never see it perching as Swallows do; for, except when it is at rest in its chimney home, it is constantly on the wing, either darting through the air, dropping surely to its nest, or speeding from it like a rocket. The Chimney Swift secures its food wholly when flying, and is more active at night than in the day. In the breeding-season its busiest time is that preceding dawn, and it then works without cessation for many hours. The whirling of the wings as the bird leaves the chimney makes a noise like distant thunder, and if there is quite a colony the inhabitants of the house may be seriously disturbed, and the presence of the nests often introduces bedbugs, as they are to a certain extent parasites of these birds. This makes him an undesirable tenant, and in modern houses, where the flues

are narrow and easily clogged, wire is stretched over the chimney mouth to keep him out.

Nothing, however, is more picturesque than these Swifts as they circle above the wide stone chimney of some half-ruined house, where the garden is overgrown by old lilacs and great banks of the fragrant bushes hide the crumbling walls. I know of such a place, only a few miles away, where the Swifts carve and eddy above the huge chimney, bent with the weight of years, in such perfect accord and rhythm, now wholly disappearing within, now curling forth in a cloud, that it is easy to imagine the fire burns again upon the hearth and that the birds are but the columns of hospitable smoke.

In wild districts the Swift retains the habit of nesting in hollow trees, the custom it must have followed until comparatively recent times in this country, as the Indians never possessed even the ghost of a chimney. These trees are used after the breeding season as roosts, and there is evidence that the birds may sometimes winter in them in a state of hibernation. In building its nest the Swift snaps little twigs from the trees, and in fixing them in place braces itself in the chimney by means of its claws and the sharp spines in which its tail feathers terminate. Its size is nearly the same as the Bank Swallow and the two flock prior to the autumn migration at about the same time, the Chimney Swift being the last to leave.

FAMILY TROCHILIDÆ: HUMMINGBIRDS.

RUBY-THROATED HUMMINGBIRD: *Archilochus colubris*.

PLATE 2.

Length · 3.75 inches.

Male · Above metallic green; belly white. Wings and tail ruddy black, the latter deeply forked. *Glistening ruby-red gorget.*

Female · Colours less iridescent; gorget lacking, tail with rounded points.

Note · A shrill, mouse-like squeak.

road, and one, which I discovered from a tower window, on the topmost branch of a spruce some sixty feet from the ground. In this last case the nest was covered with small flakes of spruce bark, instead of the usual lichens.

After the nesting the males make themselves exceedingly scarce, while the females and young haunt the garden, feeding in flocks, the young being distinguishable by their dulness of plumage and the fact that they perch frequently. All through August and early September, before cooling nights warn them away, they dart through the mellow haze claiming the last Jacque roses and the blossoms that continue to wreathe the honeysuckle, only leaving them when the twilight chill stiffens their feathered mechanism.

> When the mild gold stars flower out,
> As the summer gloaming goes,
> A dim shape quivers about
> Some sweet rich heart of a rose.
> * * * * * * *
> Then you, by thoughts of it stirred,
> Still dreamily question them:
> "Is it a gem, half bird,
> Or is it a bird, half gem?" — EDGAR FAWCETT.

ORDER PICI: WOODPECKERS, ETC.

FAMILY PICIDÆ: WOODPECKERS.

Length: 9–10 inches.

Male and Female: Above black and white, white stripe on middle of back, *red stripe on head*. Wings spotted and striped with black and white, four outer tail feathers white. Under parts grayish white. Bill blunt, stout, and straight, nearly as long as head. Female lacks red spot on head.

Note: A short, tapping sound.

Season: Resident; shifting about in light woods.

Breeds: Through range.

Nest: In holes in trees at moderate height.

Eggs: 5, clear white, but, according to Samuels, owing to their transparency, they have a pink tint before they are blown.

Range: Manitoba, Saskatchewan and Alberta.

Countries, and south in winter, to Cuba and Panama.

The Hairy Woodpecker is a common bird in wooded regions, especially where partly decayed trees have been left standing. Its creeping motion when scanning tree trunks for insects resembles that of the Black-and-white Warbler. Though it is abundant, it is shy in the breeding-season and keeps to secluded woodlands, but in the fall and winter comes freely to orchards and about houses. It has an affection for particular trees and often uses the same tree, if not perhaps the same hole, for several successive seasons.

Eight years ago I noticed this species in May in Samp-Mortar woods, a wild, rocky place, covered with laurel and abounding in the rarer ferns. From the crest of Mortar Rock I could look into the top of a tall hickory, in which a Hairy Woodpecker was boring. A few years later, at the same season, I found a similar bird nesting in the same tree and there were three holes visible in the trunk. This year I went to the place early in June. The tree was entirely dead and branchless from winter storms, the top had crumbled away so that light came through the upper holes, there were five apertures in all, and from the lowest

of these flew a Hairy Woodpecker, and when I beat on the tree with a stick the clamouring inside told that the young were hatched.

On seeing me the bird went into one of the empty holes and then flew to a little distance and, joined by the male, refused to go near the nest while I remained. The tree was so shaky that it swayed with every breeze, and it is the last year that it will shelter its black-and-white tenants. The red head band is not very conspicuous in this Woodpecker unless you look at it from above or catch a glimpse of it when the bird is going up the tree trunk.

DOWNY WOODPECKER: Dryobates pubescens medianus.

PLATE 46.

Length: 6–7 inches, the smallest of our Woodpeckers.
Male and Female: Closely resembling the last species. Wings and tail *barred* with white; the narrow, red head band of the male is replaced by a white stripe in the female.
Note: A short, sharp note and a rattling cry, which starts and ends in an abrupt precision, suggestive of a mechanical contrivance set off with a spring. This it uses in lieu of a song. (Bicknell.)
Season: An abundant resident.
Breeds: Through range.
Nest: In tree hole, varying from low apple to high forest trees.
Eggs: Similar to those of last species, but smaller.

Range: Manitoba, Saskatchewan and Alberta.

The Downy Woodpecker, the persistent apple-tree borer, is a miniature reproduction of the Hairy Woodpecker, except that its tail is *barred* with black and white. This is the little bird that ornaments the fruit trees with symmetrical rows of holes, such as would be made by small shot. He does not, however, drain the vitality of the tree, as many suppose, by taking the sap, but merely bores for insects that lie between the bark and the tissue. In fact, the operation seems to be beneficial, perhaps acts as a system of

ventilation, for I have seen some very fine old trees where the holes were so numerous as to form strange hieroglyphics upon every limb. This Woodpecker is much more sociable than his big brother, and is present, about the orchards and gardens, the entire year.

The Woodpecker is wrongly accused of boring into d[ead] timber and by letting in the water hastening its decay.

As Dixon says: "Alas! poor harmless, unoffending Woodpecker I fear by your visits to the trees you are set down as the cause of their premature decay". Full well I know your beak, strong as it is, is totally incapable of boring into the sound timber- full well do I know that, even if you were guilty of such an offense, nothing would reward your labors, for your prey does not lurk under the bark of a healthy tree. Insects innumerable bore through its bark and hasten its doom and it is your duty in Nature's economy to check them in their disastrous progress.

YELLOW-BELLIED SAPSUCKER: Sphyrapicus varius varius.

PLATE 47.

Length: 8.25–8.75 inches.
Male: Above black, white, and yellowish; below greenish yellow. Tail black, white on middle feathers, white edge to wing coverts. *Crown, chin, and throat bright red.* Bill about as long as head, more pointed and slender than in last species.
Female: Throat and head whitish.

Note: A rapid drumming with the bill on the tree branch or trunk serves for a love-song. The call note very much resembles that of the Catbird, being a kind of Mewww Meew.

Season: Earliest date of arrival April 1st, latest date of arrival May 2nd, average date of arrival April 19th in Alberta. Manitoba and Saskatchewan possibly a a few days earlier.

Breeds: Throughout the summer range.

Nest: In an unlined hole, which is often 18 or 20 inches deep.
Eggs: 5, pure white.

Range: Manitoba, Saskatchewan and Alberta.

The Sapsucker is a superbly marked Woodpecker, but its beauty is neutralized by its pernicious habit of boring holes in the tree bark through which it siphons the sap or eats the soft, inner bark.

In some localities they will destroy large tracts of fruit trees by stripping off the entire outer bark. Here, in the garden, they attacked a large spruce one autumn, and the next spring the trunk was white with the sap that leaked from the hundreds of "taps," and the tree has never since recovered its vitality.

This species of Woodpecker is the one that the term Sapsucker is most often and most justly applied, for it drills holes in the bark of certain trees and drinks the sap. It feeds also on cambium, insects and wild fruits and berries.

According to the United States Department of Agriculture the food of the Yellow-Bellied Sapsucker is based upon examinations of the contents of 313 stomachs, collected in 24 states, Canada and the District of Columbia, and distributed over twelve months of the year. Of this food 49.31 per cent is animal matter and 50.69 per cent is vegetable. Ants amounts to 34.31 per cent of the whole food, or 69 per cent of the animal part. They are evidently the favorite food, being eaten quite regularly through the year, although the months from May to August, inclusive, show the highest per centages averaging over 68 per cent.

These birds destroy a considerable amount of animal matter, several species of which are very injurious to plant life; on the other hand the damage done by this Sapsucker, in destroying the cambium and sap of trees, is so serious that it more than counterbalances any good that the birds do in other directions. Investigations show that damage to timber in certain sections is extensive and serious.

to - Classy white

"GOLDEN" FLICKER: Colaptes auratus luteus.

Golden-winged Woodpecker; Yellowhammer, Highhole, Clape.

PLATE 49.

Length: 12–13 inches.
Male: Above golden brown, barred with black. *Black crescent* on breast, red band on back of head. Round black spots on the belly, black cheek patch. Wing linings and shafts of wing and tail quills gamboge-yellow. *Rump white.* Bill slender, curving, and pointed, and dark lead-colour; feet lead-colour.
Female: Lacks black cheek patches.
Note: "Wick-wick-wick-wick!" Also a few guttural notes. "A prolonged, jovial laugh." (Audubon.)

Season: Earliest date of arrival April 17th; latest date of arrival May 3rd, average date of arrival April 25th in Alberta. Manitoba and Saskatchewan possible a few days earlier.

Breeds: Through its range.
Nest: In partly decayed trees in orchard, garden, or wood.
Eggs: Usually 6, white.

PUNK PACIFIC [illegible]

Range: Manitoba, Saskatchewan and Alberta.

This is the most common Woodpecker throughout the region, frequenting the wooded portions as well as the semi-open districts where it usually nests in an excavation made by one of its kind the past year, or builds itself a new home in the decayed or partly decayed poplars or birches.

This, the largest as well as most abundant of our common Woodpeckers, can be easily identified, when at rest, by the black throat crescent and red head patch, and when flying by the white rump and golden wing linings. The Golden-winged is a Woodpecker of many *aliases*, among which Pigeon-woodpecker, Yucker, and Yellowhammer are locally familiar.

The Flicker is a genial, sociable bird, and its hammering is one of the first bird sounds of early spring that comes from the orchard. In April or May it looks for a suitable tree to bore, or else clears out a last year's hole. The birds are very wary when the excavation is under way, and, instead of dropping the chips by the tree where they are working, carry them to some distance. There is a singular physiological fact connected with the laying powers of this Woodpecker. Six is the usual setting of eggs, but if the eggs are removed from the nest as soon as laid the *female continues laying* uninterruptedly, and according to Dr. Coues eighteen to twenty-three eggs have been taken from one nest.

When the young are hatched the parents redouble their attention, and resent any approach to the hole. They feed their young by the process known as *regurgitation*, conveying the partly softened food from their own crops to those of the young by *re*-swallowing it and placing their slender beaks in the mouths of the nestlings. A tap on the tree at this time will set the youngsters clamouring and the old birds fly out in alarm. On leaving the hole the young are at first very awkward and are unable to fly but a few feet from the ground, and are easily caught in the hand; nor do they seem to develop strength of wing for several days.

In autumn both old and young gather in considerable numbers in the pastures and feed upon the ground, looking in the distance like Meadowlarks.

ARTIC THREE-TOED WOODPECKER: Picoides arcticus.

Length: 9.5 inches.

Male: Back shining black without white; toes, two in front, one behind. Crown yellow. (Chapman)

Female: Same as the male except the crown is black.

Note: The call somewhat resembling that of the Yellow-bellied Sapsucker.

Woodpeckers, can be easily identified, when at rest, by black throat crescent and red head patch, and when ... by the white rump and golden wing linings. The Go... winged is a Woodpecker of many *aliases*, among wh...

[illegible]

[illegible] Principally between the Southern parts of Manitoba, Saskatchewan and Alberta.

Nest: In excavations in true woodpecker style.

Eggs: Pure glossy white.

Range: Manitoba, Saskatchewan and Alberta northward.

The great bulk of the food of this Woodpecker consists of the larvae of wood boring beetles or moths says the U.S. Dept. of Agriculture. These are eaten with great regularity throughout the year, but somewhat more in the colder months than in summer. In the dead of Winter, when all insect life is apparently quiescent, these birds still obtain their daily food. Flies and bees no longer sport in sushine; the beetles are either dead or snugly esconced in crevices in the bark, awaiting the return of warmth, while the larvae repose in their burrows of solid wood, apparently safe from all disturbance. But undaunted by cold and undeterred by hard work, our intrepid little freinds tare upon the secure retreats in the bark, or chisel into the solid wood and feast upon the luckless insects.

The examination of the food of this species proves conclusively, that these birds act as, "Conservators of the forest" in the strongest sense. Three fourths of their food consists of the direst enemies of the forest trees.

ORDER COCCYGES: CUCKOOS, KINGFISHERS, ETC.

FAMILY CUCULIDÆ: CUCKOOS.

Black-billed Cuckoo: *Coccyzus erythrophthalmus.*

Rain Crow.

Length: 11–12 inches.
Male and Female: *Black bill; eyelids red.* Above, general colouring same as last species. White spots on tail, small and inconspicuous.
Note: "Kow-kow-kow! kuk-kuk!"

Season: Arriving the first half of May.

Breeds: Throughout the summer range.

Nest: In a bush; a few sticks, with no edge to confine the eggs.
Eggs: Hardly distinguishable from the last species.

Range: Manitoba and probably the eastern part of Saskatchewan not known to reach as far west as Alberta.

It seems a slur upon literary tradition to call our birds, which bear the name, Cuckoos. We are so used to associate the word with the merry wanderer that "sings as it flies" of Chaucer and Shakespeare and all the lesser singers since their day. And every child, in thinking of a Cuckoo, expects to find the twin of the irrepressible little foreigner who bobs out of the clock, and will insist upon calling mother's attention to the fact that it is bedtime.

This Cuckoo is often called the raincrow because of its habit of calling loudly in damp or cloudy weather. It is usually found along the streams which have lightly wooded banks where it usually locates its nest in some bush or scrub tree at a short distance from the ground.

The insect food of this species consists principally of Caterpillars, Spiders, Grasshoppers, Ants, Wasps, Flies etc. The great majority of which are of the harmful kind. One of the principal insects which this bird devours great

their stomachs entirely furred with the hair from the Caterpillars. It would ordinarily be expected that this would very much impair digestion and cause the birds to sicken and die; not so with the Cuckoo as this appears to is one of his favorite articles of diet.

These birds are highly beneficial both to the gardener and orchardist, and should be protected at all times.

FAMILY ALCEDINIDÆ: KINGFISHERS.

Belted Kingfisher: *Ceryle alcyon.*

PLATE 51.

Length: 12–13 inches.

Male and Female: Long crest. Straight bill, longer than head; head appearing large for size of body. Above lead-blue, somewhat variegated with black. Below whitish. Two dull blue bands across breast. White transverse bands and spots on the short tail. Female has rusty bands across breast.

Note: A harsh, rattling cry, as familiar along river banks as the Jay's scream in the woods.

Season: Arriving throughout its summer range about May 15th.

Breeds: Throughout the summer range.

Nest: In hollow trees and in earth burrows; 6–8 feet deep.

Eggs: 6–8, crystal white.

Range: Manitoba, Saskatchewan and Alberta.

The Kingfisher may be easily named, as he sits on his usual perch, a dead stump or limb jutting over the water, by his large, long-crested head, which gives his body a bob-tailed appearance. Living entirely upon fish, he is driven from small streams to the larger rivers by the closing in of the ice, but in open winters I have seen this bird ~~in every~~ quite late

The Kingfisher seizes his prey by diving, and if it is small and pliable swallows it at once, but if it consists of the larger and more spiney fish they are beaten to pulp against a branch before they are swallowed, and even then the struggles and contortions the bird goes through before finally mastering the fish, would be very ludicrous were they not so evidently distressing.

The term *halcyon days* (days of fair weather) is derived from this bird's Latin name. The Kingfisher was once supposed to build his nest on a little raft and float out to sea with it, having the power of averting storms during the period of incubation. The modern Kingfisher is too wise to try any such experiment; he well knows that no one can fathom our climate or restrain Apollos from watering at unseemly times, so he digs deep into a bank, road cut, or quarry and the precious eggs are laid many feet from the outer air.

What a racket the old birds make in the breeding-season! There may be loving, harmonious Kingfisher households, but if so these sounds belie them. But who can say however; the seemingly angry shrieks of both parents may be "Rock-a-Bye, Baby," arranged by a Kingfisher Wagner as a duet!

[illegible] late fall.

Breeds: Through its range.

Nest: Of hay and sticks; commonly on the ground in a little hollow or clump of bushes.

Eggs: 4–7, dirty white.

Range: Throughout North America, nearly cosmopolitan.

A very useful Owl, feeding on small mammals, reptiles, [illegible] seen here in considera[illegible] in the marsh meadows [illegible] the tall and [illegible] being resident. It is [illegible] unny weather, prowli[illegible]

BIRDS OF PREY.

ORDER RAPTORES: BIRDS OF PREY.

FAMILY BUBONIDÆ: HORNED OWLS.

LONG-EARED OWL: *Asio wilsonianus*

Cat Owl.

PLATE 52.

Length: 14–16 inches.

Male and Female: Above finely mottled with brown, ash, and dark orange. Long, erect ear tufts. Complete facial disk, reddish brown with darker inner circle; dark brown broken bands on wings and tail. Legs and feet completely feathered. Breast pale orange with long brown stripes. Bill and claws blackish.

Note: A variety of hoot, also a moaning mew.

Season: Resident.

Breeds: In early spring, throughout range.

Nest: A rude structure which may be built either on the abandoned nests of Hawks, Crows, or Herons, on the ground, or in hollow stumps.

Eggs: 4–6, the usual soiled white.

Range: Manitoba, Saskatchewan and Alberta.

The Long-eared Owl, or Cat Owl (so called from its mewing cry and round face), has conspicuous ear tufts, as long, for the size of the bird, as those of the Great Horned Owl. These Owls frequent the same lowlands as the Short-eared species; they are very abundant in early winter, both along the marsh borders and in the woods by the river.

This species has a very bright, saucy expression and looks at you as if

it was meditating a practical joke of a particularly aggravating nature. From an agricultural standpoint it is a beneficial Owl, feeding chiefly upon mice and other small mammals, beetles, etc., only occasionally eating small birds.

LONG-EARED OWL: *Asio flammeus*.

Length: 13.75–17 inches.

Male and Female: Inconspicuous ear tufts, facial disk with a dark ring enclosed in a lighter one. Plumage varied from bright orange to buffy white, with bold stripes of dark brown, darker above and more mottled below, growing whiter toward vent. Legs feathered with plain buff. Bill and claws dusky blue-black.

Note: A quaver.

Breeds: Through its range.

Nest: Of hay and sticks; commonly on the ground in a little hollow or clump of bushes.

Eggs: 4–7, dirty white.

A very useful Owl, feeding on small mammals, reptiles, etc.; seen here in considerable numbers in the marsh meadows in the fall and early winter, possibly being resident. It is a *day owl*, and can be seen even in sunny weather, prowling about in the long, withered marsh-grass.

Mr. L. M. Turner, the Arctic explorer, says that among the natives of the Yukon district (Alaska) the dried liver of this owl, ground to a powder and administered in food, is used as a love philter.

Nuttall describes the Short-eared Owl as being so fierce that it will sometimes attack men seated by midnight campfires. This seems very dubious, as even the powerful Great Horned Owl rarely attacks man, unless he is cornered or attacked first. It is more probable that at some time the Owl, bewildered by smoke and flames, unwittingly flopped into an encampment, and, when seized, fought for liberty.

Horned Owl.

PLATE 54.

Length: 19–23 inches; female, 21–24 inches.

Male and Female: Large ponderous birds. Long ear tufts, feathers mottled irregularly, buff, tawny brown, and whitish. Iris yellow, pupil round and large, with great power of contraction. Feet and legs feathered. Bill and claws black.

Note: A wild startling "Hoo-hoo-oooo! Waugh-hoo!"

Season: Resident.

Breeds: In February or March, but the young grow slowly, remaining ten to twelve weeks in the nest.

Nest: Seldom in holes at the north, usually a bulky nest on a horizontal branch, in deep woods. Preferably in evergreens and near the top.

Eggs: Usually 2, dirty white.

This vigorous and untamable Owl is easily identified because of its great size and long ear feathers. The largest

wings and tail. Legs and feet completely feathered. Breast

Breeds: In early spring. Throughout range.

Nest: A rude structure which may be built either on the abandoned of Hawks, Crows, or Herons, on the ground, or in hollow

4–5, the usual soiled white.

of our common Owls (the rare Great Gray Owl alone being larger), it is a bird of the deep woods, swift in flight and ferocious in the extreme, both in seizing large game as well as in fighting when disabled. A nocturnal species, it can see perfectly in bright sunlight, though it prefers to remain secluded. During the nesting-season, if the weather is cloudy, it searches for food both day and night.

It is the most destructive of Owls and of all the birds of prey except perhaps the Goshawk and Cooper's Hawk. Dr. Merriam, in speaking of its mischief in the farmyard, says, "Indeed I have known one to kill and decapitate three turkeys and several hens in a single night, leaving the bodies uninjured and fit for the table." (In common with many other birds of prey, it prefers the brain to any other portion of the victim.) This savage Owl also destroys vast quantities of large game-birds and may be safely considered undesirable from the standpoint of the small farmer, however much it may aid the tiller of vast fields by its destruction of vermin.

I have seen the Great Horned Owl sit in the daytime with its inner eyelids closed, and then suddenly open them, blink once or twice, and fly away, snapping its beak angrily. Its hooting cry, uttered in the bare woods in early spring, is one of the most weird, uncanny sounds in Nature. Icicles often hang from its nest; and ice still locks the streams as it sweeps about, suggesting every form of dark emotion by its voice, — mocking laughter, despair, and a choking rattle, — until you feel that the Wild Huntsman may be galloping through the shadows blowing his fatal horn.

Snowy Owl: *Nyctea nyctea.*

Arctic Owl.

Plate 4.

Length: 20-24 inches.

Male and Female: Plumage varying from *pure white* to white barred and spotted with brown and black. No *ear tufts.* Legs and toes thickly feathered. Bill and claws black. Female larger; young darker and more spotted.

Note: A growl, a bark, and a hoot.
Season: A winter visitor.
Breeds: From Labrador northward.
Nest: On ground, lined with feathers.
Eggs: 5-10, laid at long intervals, so that when the last one is deposited the first bird is ready to fly.
Range: [illegible] in winter migrating south to the Middle States [illegible] to South Carolina.

Range: Manitoba, Saskatchewan and Alberta.

The Snowy Owl is one of the dramatic figures of the winter landscape, and appears like a personification of Boreas himself, coming to superintend the arranging of his snow-drapery. This Owl usually precedes or follows a severe storm, and when the snow has ceased

The Snowy Owl is really of no great economical value to the farmer as they are in the region under discussion only during the Winter months. Their food usually consists of small mamals and such birds as they are able to pick up, especially the Ruffed and Sharp-tailed Grouse.

In all probability they do far more good by destroying such game birds as are troubled with some serious disease which has made them unable to get away from the Snowy Owl; for instance, if a Grouse is blinded by some fungus form appearing over its eyes, it is far better that it should be killed than to be left to breed and rear a brood af young, which would also be affected in the same way; thereby affecting other Grouce which were in good health, after which, a plague of this same disease might appear carrying off practically the entire Grouse population.

The Snowy Owl is a great fisher, placing himself along the side of a stream where fish are likely to pass, on seeing one he darts out his claw with lightning like rapidity, and returns it with a fish.

Insert Hawk Owl here

GREAT GRAY OWL: Scotiaptex nebulosa.

Length: 27 inches

Male and Female: No ear-tufts; eyes yellow. Above black, finely and irregularly marked with white; breast streaked; feet feathered to toe nails. (Chapman)

Song: Notes-a tremulous vibrating sound.

Season: A resident.

Range: Throughout its summer range.

HAWK OWL: Surnia ulula caparoch.

Length: 50 inches.

Male and Female: Above brownish black; crown thickly spotted; scapulars conspicuously margined with white; chin blackish; belly barred. Tail long and rounded. (Chapman)

Notes: A shrill whistling cry.

Season: Mr. Atkinson states these birds are a regular and numerous fall migrant and winter visitor but not known to breed in Manitoba. No record is at hand regarding their breeding nor the season in which they occur throughout Saskatchewan and Southern Alberta. I find them to be quite common in breeding north of the North Saskatchewan River.

Nest: A deserted Hawk's or Crow's nest or in cavities in trees.

Eggs: 3 to 8 white.

These birds are much more numerous during the winter, fall and spring months than they are during the summer, as only a few appear to remain to breed in the locality north of the North Saskatchewan River.

I have noticed them on several different occasions catching field mice after the farmer removed the stooks of grain; their eyes appear to be quite sharp as they seem to be able to detect a mouse running along the ground at the distance of a hundred feet or more. After catching the mouse in their beak they will transfer it to their claws while flying with the greatest of ease.

A few seasons ago, while out with my two little boys gathering in a load of barley from the field, we observed one of these birds perched in the top of one of the trees almost continually. The boys captured a great many mice and would throw them in the direction of the Hawk Owl, who would immediately swoop down, sometimes catching them before they struck the ground, carry them off and cache them in some convenient place where they could be eaten at leisure.

I have never heard any complaints from any one being bothered by the Hawk Owl and am of the opinion that it is the farmers friend and should be protected.

Nest: Either an old Hawk's or Crow's nest is appropriated or a nest is built in a similar manner, usually ~~being~~ placed in a pine or spruce tree.

Eggs: 2 to 4 white.

Range: Ranging from a Winter resident in Manitoba and parts of Saskatchewan, to a permanent resident, at least, in the northern half of Alberta.

The food of the Great Gray Owl consists principally of Hares, Mice and other small mammals as well as some small birds.

While driving along the road one Winter I suddenly came on one of these Owls devouring a Northern Hare. He was so busily engaged with his meal that he did not notice me until I was within a few feet of him, when he suddenly took flight.

These birds are not very numerous in this locality only a few pairs being seen each year, although I am certain that they nest in the immediate vicinity as I have seen them every month in the year.

FAMILY FALCONIDÆ: FALCONS, HAWKS, EAGLES.

Marsh Hawk: ***Circus hudsonius.***

Harrier, Blue Hawk.

PLATE 55.

Length: 17–19 inches; female averaging two inches longer.
Male: Above bluish gray; below white mottled with brown. Wings brownish, long, and pointed; tail long; upper tail coverts white.

FAMILY FALCONIDÆ: FALCONS, HAWKS, EAGLES.

Marsh Hawk: ***Circus hudsonius.***

Harrier, Blue Hawk.

PLATE 55.

Length: 17–19 inches; female averaging two inches longer.

Female: Dark reddish brown; below rusty with spots. Bill hooked and black, longer than the Owl's; feet black.
Note: All Hawks have a screaming cry, but it is of little aid in identifying species.

Season: Earliest date of arrival April 2nd, latest date of arrival April 28th, average date of arrival April 16th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Through range.
Nest: On the ground, one foot in diameter, of grasses, etc.; in swampy meadows or among rushes in marshes.
Eggs: 4–5, whitish; sometimes with irregular blotches of brown and gray shell marks.

Range: Manitoba, Saskatchewan and Alberta.

At certain times the Marsh Hawk is one of the most harmless and beneficial of its family; it feeds on reptiles, Locusts, Grasshoppers, and small mamals; not generally disturbing domestic poultry, but when it gets into the habit of once helping itself to the barn-yard fowl, it becomes a great nuisance, often carrying off dozens of chickens before it can be stopped. It's chicken thieving propensity does not, however, assert itself; except the fact of which we are truly thankful, as it is able to find great quanities of food throughout the marsh lands and meadows.

When on the wing the females and young may be distinguished by the warm, rusty colour of their under parts, and while at rest by the white upper tail coverts.

Sharp-shinned Hawk: *Accipiter velox.*

PLATE 56.

Length: 12 inches; female 14 inches.
Male and Female: Wings longer than tail. Eyes reddish. Above bluish gray, deepest on head. Beneath whitish, barred on the sides and breast with rusty and dark brown. Tail even or notched. The young are spotted more or less on the back and streaked below. Head of this and next species smaller than last, while legs and tail are relatively longer. Feet slender.

Season: Arriving throughout its range the latter part of April.

Breeds: Throughout its summer range.

Nest: Made of dry sticks lined with bark and very [illegible] the crow nest, except being smaller.

Eggs: 4–5, purplish white, spattered heavily with dark brown; sometimes the spots form a wreath at the large end.

Range: Manitoba, Saskatchewan and Alberta.

This small and very common Hawk is possessed by a spirit of dash and daring altogether out of proportion to its size. Dr. Abbott, in speaking of the rapidity of its movements, says: "It is feathered lightning. He ceases to be before you realize that he is."

The Sharp-shinned is one of the most destructive of our common Hawks and shares, with the next species, the reputation of being an inveterate poultry-killer, and it causes such sad havoc among Song-birds that a black mark may be set against it to denote that it is a worthy target for rifle practice. Its dexterity in flying allows it to capture by surprise game which larger Hawks secure by weight and strength combined. Nuttall tells of a Hawk of this species that came day after day to a farmhouse, until before it was killed it had destroyed between twenty and thirty young chickens.

Cooper's Hawk: ***Accipiter cooperi.***

Chicken Hawk.

Length: 15–16 inches.

Male and Female: Uniform bluish gray above, top of head blackish; tail crossed by several blackish bands; below white, with breast and sides barred with dusky or rufous. This species resembles the last, but is distinguishable by its greater size and rounded tail. Feet rather stout, greenish yellow.

Season: Arriving throughout its range the latter part of April.

Breeds: Throughout its summer range.

Nest: In the tops of trees in thick woods, some authors say in evergreens; those I have seen have been in hickories.

Eggs: 3-4, bluish white, either plain or spotted with reddish.

Manitoba, Saskatchewan and Alberta.

A mischievous harrier of all birds from barnyard fowls to Song-birds, doing by craft what it cannot accomplish by daring alone.

A country woman, who is a very successful chicken-raiser, tells me that she loses annually more chickens by this Hawk than by weasels, rats, or disease, no matter how carefully the broods are cooped. The Hawk takes up his post on an old stump or tree in an adjoining wood lot and gives a peculiar cry, which seems to lead the chickens in its direction, and before the mother can give a warning cluck one will be borne off. They will seize rabbits, squirrels, and Partridges readily, but hesitate to tackle a fully grown fowl, unless it is disabled in some way.

The protective instinct of the mother Hen, when a Hawk is in the vicinity, and the unquestioning obedience of the brood, is one of the prettiest, though most ordinary, spring scenes on the farm. The hen-coops are perhaps barrels, laid on their sides with slatted ends, ranged along the roadside fence opposite the farmhouse, so that an easy watch may be kept upon them. The Hen ventures out, scratching and clucking to the chicks as she goes; they follow, straggling more or less on private investigations. The sky is blue and cloudless; in the distance hovers a bird of some sort, but it is a mere speck. The Hen does not appear to look up, but suddenly she becomes motionless. The speck develops into a Hawk, which nears, flying in circles and descending at the same time, so that it is difficult to predict where it will alight. The Hen crouches, spreads her wings, and gives a short cry, different from her usual cluck; instantly the brood rushes pell-mell to the offered shelter, the wings drop, and when the Hawk makes a final swoop within two feet of the ground he finds nothing but a very broad-backed and resolute Hen flattened in the dust, and he disappears over the meadows without having paused an

instant. But his mate — for Hawks often prowl in pairs — is still sailing far off and mother Hen, having had one narrow escape, hustles her family back to their barrel.

GENUS: Astur striatipilus striatipilus.

Length: 22 to 24 inches.

Male and Female: Above blueish slate; crown darker; a whitish line over the eye to the nape; under parts finely marked with gray and white.

Young: Above blackish brown, rusty and buff; under parts buffy white streaked with blackish. (Chapman)

Season: Earliest date of arrival April 1st, latest date of arrival April 28th, average date of arrival April 10th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout its summer range.

Nest: The nests are usually placed well up in trees and are constructed of sticks and lined with fine bark etc.

Eggs: 3 or 4 blueish white, usually unmarked but sometimes with faint spots of brown.

Range: Ranging from a Winter visitant in Manitoba to a summer resident in Alberta.

The American Goshawk is one of the largest and strongest, as well as the boldest of the Hawk tribe; these birds are capable of carrying off a full grown chicken as well as a Sharp-tailed and Ruffed Grouse which they capture whenever it is possible for them to do so.

While travelling along a deserted road several years ago I came across a dead Hawk Owl and an American Goshawk which had killed each other. The head was entirely bitten off the American Goshawk while the tallons of the Goshawk were still piercing the heart of the American Hawk Owl. These Hawks are great Chicken thieves, being the greatest pest along that line that the farmers have throughout their range. I do not, as a general rule, advocate the killing of any birds unless I am positive that they are doing a great deal of damage, but in the case of the American Goshawk I think the proper thing to do is to destroy these birds as soon as one is certain that they are destroying

the poultry.

Be in no rush, however, about taking down the old shot gun until you are positive that you know what Hawk it is that is distroying your chickens, for in your haste you may kill one of your best hawk friends, for instance the Rough-legged Hawk which is known as the Gopher Hawk on account of its killing large numbers of Gophers.

Do not kill a hawk or an owl just because it is a hawk or owl, in fact, do not kill any at all until you are absolutely certain that it is necessary for you to do so in order to preserve your interests.

WESTERN RED-TAIL HAWK: Buteo borealis calurus.

Length: 19–22 inches; female, 22–24 inches.
Male and Female: Above dark brown, variegated with white, gray, and tawny; below whitish and buff, streaked across belly with brown. *Tail rust-red,* with a black band near end; in young, tail gray with numerous narrow brown bars. Moderate, horn-coloured bill; feet stout and strong.

Season: Earliest date of arrival April 1st, latest date of arrival April 21st, average date of arrival April 12th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Through summer range.

Nest: Built in March, in a tall tree in deep woods. A bulky affair of sticks with an upper nest; lined with soft bark like the Crow's.
Eggs: 2–3, dirty white, thickly blotched with purplish brown.

Range: Manitoba, Saskatchewan and Alberta. Although the Manitoba bird appears to be nearer the form of Krider than that of the Western Red-tail, the difference not being sufficient to record both species here.

Owing to different phases of plumage, it is often difficult to identify the larger Hawks on the wing; but the *red tail* is a distinctive mark of the adults of this species at all seasons.

Farmers regard it as a nuisance, and kill it whenever they can as a punishment for poultry stealing; but Dr. Fisher thinks it is a mistake to destroy it unless when caught in the act; as, after careful investigation, it has been found that eighty-five per cent of its food is made up of rodents destructive to agriculture. But still farmers make scare-crows, and, when possible, shoot a Hawk and hang it in the barnyard as a warning.

The Red-tail Hawk is truly the farmers friend, it distroys great numbers of injurious rodents thereby helping the farmer.

The nest of the Red-tail is placed at almost any height from 20 to 90 feet from the ground and is very bulky; being composed of quite large sticks and lined with bark. The eggs are from 2 to 4 in number and range anywhere from almost a bluish white, unmarked in the younger birds, to very beautiful specimens variously marked with many shades of red and brown in the older birds. These birds use the same nest, if undisturbed, year after year, and I have known them to return and deposit a second sitting of eggs in the same nest where their previous sitting had been taken.

ROUGH-LEGGED HAWK: Archibuteo lagopus sancti-johannis.

Length: 21 to 23 inches.

Male and Female: Legs feathered to the toes. Basal half of tail white, end half barred with black, Belly with more or less black.

Young: No black bars on end half of tail; buffier below more black on belly. Black phase. Black more or less varied with brown and rusty as it approaches light plumage of adult or young; but to be known by feathered legs. (Chapman)

Season: Earliest date of arrival March 24th, latest date of arrival April 20th, average date of arrival April

a few days earlier.

Range: Throughout the summer range.

Nest: Composed of sticks lined with finer material, placed in trees, sometimes on the ground.

Eggs: 3 or 4 white, splashed with dark brown.

Range: The Canadian Catalogue of birds states on the authority of Mr. Seton and Mr. Atkinson that these birds are not known to breed throughout Manitoba, but as they breed over a considerable portion of Alberta, it is reasonable also to think that they breed as well in certain parts of Saskatchewan.

These large and handsome hawks are the inhabitants of the prairie country north and west of the Great Lakes where they find an abundant supply of the smaller rodents, which usually form their chief articles of diet. In fact it feeds so much on the ground squirrels or gophers that it has become generally known as the Gopher Hawk.

Several hundred stomachs of these hawks have been examined by different departments which has proven condlusively that they did not live on poultry, but gleaned their living mostly from the prairie; their principal food being Gophers and other small rodents as well as a great number of the larger insects.

These birds are truly the farmer's friend and should always be protected.

PIGEON HAWK: Falco columbarius columbarius.

Length: From 10 ½ to 13 inches.

Male: Above slaty blue; middle tail feather with not more than four black bands.

Female: Above dark blackish brown; bars in middle tail feathers five or less; below more heavily barred than in the male.

Season: Earliest date of arrival April 15th, latest date

of arrival April 25th, average date of arrival April 19th in Alberta. Possibly a few days earlier in Manitoba and Saskatchewan.

Breeds: Throughout western Saskatchewan and Alberta. It

Nest: Its nest is usually located, either, in an excavation ma made by a woodpecker, a natural cavity or in some deserted crows, or hawks nest.

Eggs: Four or five with a brownish buff ground color blotched with brown and chestnut.

Range: These birds range from Manitoba and Eastern Saskatchewan as migrants to summer residents and breeding in Western Saskatchewan and Alberta. I have found them to be much more numerous north of the north Saskatchewan River than any point south of it.

The Pigeon Hawk is one of the smaller hawks and does not destroy a great deal of poultry, although it has been known to take small chickens and destroy great numbers of pigeons in certain localities.

On a trip in central Alberta, north of the Saskatchewan River, I observed a great many pairs of this bird sitting along the roadside on dead stubs or fence posts; sometimes in company with the Sparrow Hawk. The farther north I travelled the more common they became, and the less common became the Sparrow Hawk. These birds do not do any considerable damage to the farmer unless they nest in the immediate vicinity of his dwelling.

BALD EAGLE: Haliæetus leucocephalus leucocephalus.

White-headed Sea Eagle.

PLATE 58.

Length: 3 feet. Female larger.
Male and Female: Neck, head feathers, and tail pure white in adults, brown in young; beak yellow and abruptly hooked; plumage dark brown; *legs feathered only half-way down;* feet yellow.

Season: Resident.

Breeds: Through range.
Nest: A bulky platform of stalks and litter, some 6 feet across and 3 feet deep; either in large trees or on rocky ledges.
Eggs: 2, white; 2½ to 3 inches in length.

Range: Manitoba, Saskatchewan and Alberta.

Regarding the food habits of the bald eagle the U.S. Dept. of Agriculture states that since the bald eagle feeds largely on fish of various kinds it of course distroys fishes useful to man, and to this degree must be considered injurious; but the total amount of this harm would seem to be comparatively small for much of its finny prey consists of species not economicially important. On the other hand the devouring of vast quantities of dead fish, that left to decay would polute the air is a positive benefit. Its destruction of ducks, geese, and other water fowl, all of which are available as food for man, is perhaps its most serious, because most frequent, fault but this is to a considerable extent local, and confined largely to the seasons of migration.

Although not often attacking large animals, it sometimes will kill fawns. This, however, is much more than offset by its destruction of more or less noxious mammals as ground squirrels, prairie dogs, rabbits, rats and mice. The Bald Eagle is almost everywhere somewhat of a scavenger, a trait that should be set down to its credit.

All things considered, the Bald Eagle is rather more benificial than otherwise, since much of its food is of little or more direct economic value, while the good it does, more than compensates for its obnoxious deeds; and further more it seems not likely to ever become abundant enough in any locality to be seriously destructive.

This bird is usually called the bald Eagle on account of its head appearing to be bald which, in reality of course, it is not. The white head feathers only making it appear to be so.

The white head identifies the fully grown bird beyond question; but as it takes the young three years to perfect their plumage, some confusion will arise. The feathers of the first year are uniform dark brown, and the birds are called Black Eagles. The second year they are known as Gray Eagles, not earning the title of *Bald* until the third year. Remember, however, that the Bald Eagle has its *claws and ankles unfeathered* (while the other American Eagle, the Golden, is feathered to the claws), and then you will not confuse the species.

The Bald-headed Eagle is a long-lived bird, of majestic appearance, whose piercing voice can be heard above a wild storm; and for these qualities it was unfortunately chosen as the emblem of our Republic, for its noble qualities are in reality either wholly superficial or else imaginary. It is an inveterate bully, obtaining a great part of its food by robbing the Fish Hawk, while perfectly able to fish for itself; and though it has been known to carry off lambs and young pigs, it has been vanquished in a fair fight by a rooster. Preferring a fish diet, it will, however, eat any kind of animal food, even devouring carrion.

These Eagles are cowardly parents, but devoted as couples, and their union, on the evidence of good authorities, appears to be for life. They travel in pairs, and never in flocks, as is the habit of Vultures.

GOLDEN EAGLE: Aquila chrysaetos.

Length: About three feet.
Legs are feathered to the toes.

Male and Female: A rich brownish black; the back of the head and the nape are somewhat paler than the body.

Season: A resident.

Breeds: Through range.

Nest: Composed of large sticks lined with smaller sticks, leaves, weeds etc.

Eggs: Eggs are white in color being blotched and specked with endless shades of light brown, gray, lilac etc.

Range: Manitoba, Saskatchewan and Alberta.

This bird is one of the best known of the Eagle family. He is found more usually in the hilly and mountainous countries, where his nest is usually located on some high ledge or juting rock, where he is practically free from the encroachments of any of his animal enemies, except man. In the more open country, away from the mountains his nest is located usually in some tall and almost inaccessible tree, where he rears his young by feeding them upon almost any food which he is able to procure.

The nest is usually a well built structure, commonly when first constructed, not being very large, but by the addition of building material each year the nest usually reaches vast proportions, if the birds are left undisturbed they nest in it year after year.

It is claimed by many that the birds mate for life, and it is also definately known that they will occupy the same nesting sight for a good many years and possibly a life time if left undisturbed.

The food of the Golden Eagle consists largely of poultry, grouse, ptarmigan and other game birds which aside of being of great food value to man are of considerable economical importance as insect and weed-seed destroyers. The destruction of water birds, such as Ducks and Geese, is in the Golden Eagle's case, of much less consequence since the number taken is relatively small; but so far as it goes is for the most part an injury. The song and other birds taken are so few that they scarcely need be more then mentioned. Sheep and lambs are also said to enter upon the Golden Eagles bill of fare. Poultry, though not infrequently caught, is ordinarily protected by being near the farm house, where the eagle is usually does not care to venture.

On the other hand, much good is done by the often extensive slaughter of spermophiles in Agriculture or grazing localities, where they are very injurious to crops.

The killing of Rabbits is also a benifit for these animals are often a ~~beast~~ pest.

Other animals eaten to some extent by the Golden Eagle and whos destruction is to be treated, ~~in large degree~~ at ~~least~~, as advantageous, are rats, mice and rattlesnakes.

The Eagle does man another good turn in the disposal of carrion, though this is not a very regular or frequentoccurance.

Good, therefore, in some respects, but bad in others, the Golden Eagle must be considered on the whole more harmful than benificial states the U.S. Dept. of Agriculture.

American Sparrow Hawk: ***Falco sparverius.***

PLATE 59.

Length: 10–11 inches, sexes the same size.

Male and Female: Above reddish, with or without black bars and spots. Top of head bluish slate with a red patch. Below varying from whitish to dark reddish, with or without black spots. Wings narrow and pointed. Female has dusky bars on

Season: Earliest date of arrival April 6th, latest date of arrival April 22nd, average date of arrival April 17th in Alberta. Manitoba and Saskatchewan possible a few days earlier.

Breeds: Throughout the summer range.

Nest: Lays in hollow trees, old Woodpecker holes, and sometimes in Dove cots.

Eggs: Variable; some sets plain buffy brown, others heavily splashed with dark brown or wreathed at the larger end.

Range: Manitoba, Saskatchewan and Alberta.

This is the smallest, handsomest, and one of the most useful of our Hawks. It is one of the three small species that Dr. Abbott characterizes as belonging to the *impetuous* class, in distinction from the larger Hawks, which he calls *meditative* and *deliberate*.

It is easily recognized from its small size, and it resembles a big Fox Sparrow with a hooked beak and black whiskers.

The Sparrow Hawk has the Shrike's trick of dropping on its prey from a height, instead of approaching in circles. They collect in numbers in the fall and early spring near bird-roosts, and seize their victims when they emerge in the morning, and particularly toward night.

This Hawk is a consumer of beetles and other large insects, mice, etc.; it kills small birds, and sometimes Pigeons, but not preferably.

OSPREY: Pandion haliæ tus carolinensis.

Fish Hawk.

PLATE 60.

Length: About 24 inches; female larger.

Male and Female: Plain dark brown above, the tail having a white tip and a band of dark brown. Head, neck, and lower parts white; breast plain, or sometimes spotted faintly with brown. Bill bluish black; feet grayish.

Note: "Phew, phew, p-hew!"

CANA

Season: Arriving throughout its range shortly after the breaking up of the ice in the spring.

Breeds: Throughout their summer range.

Nest: In trees near or over water; a bulky nest on the plan of the Eagle's.

Eggs: 2–3, variable in size and colour; average, 2½ × 1¾ inches.

Range: No records are at hand of this species breeding in Manitoba or Saskatchewan although it is found in many localities throughout Alberta.

The familiar, brown, Eagle-like bird, with very large talons, which is seen hovering over Sound, creek, and river, particularly in spring and early fall. The Fish Hawk, as it is popularly called, follows schools of fish, and, dashing from considerable height, seizes its prey with its stout claws. If the fish is small, it is immediately swallowed; if it is large (and it will secure occasionally shad, bass, etc., weighing

The [illegible]-headed Eagle is a long-lived bird, of majestic appearance, whose piercing voice can be heard above a wild storm; and for these qualities it was unfortunately chosen as the emblem of our Republic, for its noble qualities are in reality either wholly superficial or else imaginary. It is an inveterate bully, obtaining a great part of its food by robbing the Fish Hawk, while perfectly able to fish for itself; and though it has been known to carry off lambs and young

five or six pounds), it is taken to a convenient bluff or tree and torn to bits. Sometimes the Fish Hawk dives quite deep, and, when he emerges, shakes a shower of spray from his wings and rises slowly. It is at this juncture that the Bald Eagle usually manages to rob him of the fish by either seizing it or startling the Hawk so that he looses his hold. The Osprey when fishing makes one of the most breezy and spirited pictures connected with the feeding-habits of any of our birds, for often there is a splashing and a struggle under water when the fish grasped is either too large or the great talons become entangled. Occasionally the Osprey is carried under and drowned, and large fish have been washed ashore with these birds fastened to them by their claws, though it usually feeds upon fish of little value.

ORDER COLUMBÆ: PIGEONS.

FAMILY COLUMBIDÆ: DOVES AND PIGEONS.

MOURNING DOVE: Zenaidura macroura carolinensis.

PLATE 62.

Length: 12–13 inches.

Male and Female: General appearance when in the trees, a bluish fawn colour. Above olive-brown, varying to a bluish gray, neck and head washed with metallic tints. Below a dull purplish, changing to reddish brown. Two middle tail feathers as long as the wings. Bill black, feet lake-red. Female duller.

Note: A plaintive mournful "Coo-o, coo-o!"

Season: This Bird has only been seen by me once in the vicinity of Edmonton during a period of ten years. This was on June 29th 1909. They, in all probability, arrive throughout their range in Manitoba and Saskatchewan during the early part of May.

Breeds: Through its summer range.

Nest: A few loose sticks, sometimes laid on an old Robin's nest.
Eggs: 2, white.

Range: Manitoba and Saskatchewan and possibly the southern part of Alberta.

This Dove is one of most prettily shiftless housewives among birds. She has softly coloured plumage, a refined,

though sad, voice, and many gentle, lady-like ways; but when it comes to nest-building (and the female is always rightly held responsible for the neatness of the home), she is utterly wanting. Even though her mate should decline to furnish her with a more liberal supply of sticks, she could arrange those she has to better advantage; but she evidently lacks that indispensable something, called *faculty*, which must be inborn.

The eggs or bodies of the young show plainly through the rude platform and bid fair either to fall through it or roll out, but they seldom do. Meanwhile she coos regretfully, but does not see her way to bettering things, saying, "I know that I'm a poor housekeeper, but it runs in our family"; but when the Doves choose a flattened-out Robin's nest for a platform, the nestlings fare very well.

Though inhabitants of woodlands, these birds are coyly sociable and always build a nest or two in the garden. They usually choose the pines and spruces, and put the nest close to the trunk where two adjoining branches start; sometimes the nest will be twenty feet from the ground, but it is usually lower. The monotonous cooing, which gives them their name, is a rather desolate sound except as it blends with the morning chorus.

They seldom feed upon insects; but prefer seeds of various sorts, and glean grain from the fields after harvest, though I have never seen them take it from the ear, and they cannot be said to do any damage. The young are easily tamed, if taken from the nest, and make very gentle and attractive pets, but are of too gross a habit to be kept in the house.

ORDER GALLINÆ: GALLINACEOUS BIRDS.

FAMILY TETRAONIDÆ: GROUSE, PARTRIDGES, ETC.

RUFFED GROUSE: Bonasa umbellus to at

COMPANY
Washington Territory.

DATE

... Canadensis, but it has become exterminated in ... localities and is a rare summer resident whose appear... is carefully noted. Old housekeepers remember when.

Length: 16–18 inches.

Male and Female: Slightly crested head; yellow eye stripe; neck mottled with reddish and dusky brown. Back variegated chestnut; lower parts lighter, buff or whitish, with dark bars. Long tail, which spreads fan-like, reddish gray, beautifully barred. Neck ruff of dark feathers, with iridescent green and purple tints, which, in the female, is dull. Claws not feathered.

Note: A Hen-like cluck.

Season: Resident.

Breeds: Throughout range.

Nest: On the ground, among dry leaves; frequently a bunch of leaves between the roots of a chestnut.

Eggs: 10–15, rich buff, usually plain, sometimes specked with brown.

Range: Manitoba, Saskatchewan and Alberta.

The Ruffed Grouse, which is called the Partridge in New England, is a case where incorrect *local* nomenclature has created permanent confusion. It is a *true Grouse*, and the *real Partridge is the Bob-white*. The term *Partridge* seems, however, to be a fixture in literature as well as in the markets.

The Ruffed Grouse is familiar to those who have been in the habit of walking in the New England woods or remote lanes in the spring or autumn; it is a resident, but is more apt to be seen at these two seasons. In woods where the underbrush has been thinned out, and not wholly cut away, and where shooting is forbidden, this Grouse shows, in spring, almost the tameness of the domestic fowl; but in autumn it is more shy, for, if protected in some places, it is harried in others and become suspicious.

The Grouse mates in late April; and when the chicks are hatched, they immediately leave the nest and follow their mother. They obey her authority as quickly as chickens do the Hen, except that when they hear the warning note, they dive under leaves and bushes, while she leads the pursuer off in an opposite direction. The female attends

to the duties of nest-building and incubation alone; the males seem to feel themselves *de trop* at this time, and keep separate, roosting together, and rejoining their mates when

the young are hatched, and then they roam as a family.

The male Ruffed Grouse has the same habit of pluming and strutting as the Turkey-cock, and also makes the drumming noise which has caused so much dispute and which is attributed to at least four different causes. This peculiar sound begins in spring, and, though not belonging to the breeding-season alone, is most frequently indulged in at that time. It seems to be in token of general good health and spirits as well as to call attention to the drummer. Heard at a little distance it is a hollow, vibrating sound, beginning softly and increasing, as if a small rubber ball was dropped slowly and then rapidly bounced on a drumhead.

It is my opinion that the drumming sound made by the Ruffed Grouse is made in the following manner. The wings are extended at full length out from the body and are drawn toward the body very rapidly, striking it and producing the drumming notes which is first heard when the bird begins to drum, these motions become more and more rapid until one would almost think the bird would be lifted entirely off his feet, and the wings become a blur on both sides of his body.

I have watched this drumming on several different occassions and it has never appeared to me that the wings struck over the back of the bird as is given by some authorities, neither could I see that they struck the log at any point in their movement. These drumming notes, I have found, can be heard in the bushy country at a distance of something like four hundred yards.

The food habits of the Ruffed Grouse have been investigated very exhaustively by the U. S. Dept. of Agriculture which report the following. The analysis of the food taken by the Ruffed Grouse shows 10.92 per cent of animal matter and 89.08 per cent vegetable matter; the animal food is almost all insects. The vegetable food consists of seeds, fruits, leaves and buds, and miscellanous matter. The insect food proper includes Grasshoppers, Caterpillers Beetles and Miscellaneous insects.

"The young of most birds are far more insectiverous than adults, a statement that applies to gallinaceous

birds, though to a less extent than to tasserines. More than 95 per cent of the diet of the young grouse, until it is about a quarter grown, consists of insects. It should be noted therefore that the Ruffed Grouse, though only slightly insectivorous when adult, as a chick destroys great numbers of insects, and deserves much more credit from farmers than it usually receives,

SHARP-TAILED GROUSE: Pedioecetes phasianellus phasianellus.

Length: 17 inches.

Male and Female: Breast feathers with inverted V shaped loops; no ~~xxxx~~ neck tufts, prevailing color above more buffy than blackish, barred with rusty and margined with paler rusty.

Note: a peculiar cackling call sometimes interpreted as Kra-ko, Kra-ko.

~~xvxvxvxxvxvxvxvxvxvxvxvxvxvxvxv~~

Season: A resident.

Breeds: Throughout its range.

Nest: On the ground usually in the shelter of some bluff

Eggs: 8 to 15 eggs of a drab color somewhat speckled with brown.

Range: The prairie portions of Manitoba, Saskatchewan and Alberta.

In regard to the curious courtship Prof. ~~xxx~~ Macoun writes: "The males collect in large numbers on some hill about the end of April or the beginning of May to have their annual dance, which they keep up for a month or six weeks. It is almost impossible to drive them away from one of their hills when they are dancing. One day about the middle of May I shot into a dancing party, killing two, and wounding another, which flew a short distance. I went to get it and before I got back to pick up the dead birds, the others were back dancing around them."

From ~~six~~ eight to fifteen eggs of a drab color very minutely speckled with brown are usually deposited in a grass lined

nest under the shelter of a bush or a tuft of grass. About three months after hatching, the young are full grown. When disturbed they rise with a noisy, clanking cry; after a short distance the flight changes to an alternation of rapid vibrations of the wings and gliding or sailing on stiffly out spread pinions.

The sharp-tailed grouse are partly migratory. In Winter they take refuge in the tallest trees, walking among the branches almost as nimbly as the ruffed grouse. Like the latter, the present species has a habit of plunging in the snow to spend the winter nights. It has many natural enemies in the winter; and in the summer the Golden Eagle has been known to feed its young very largely upon the flesh of the sharp-tailed grouse.

The food habits of the sharp-tailed grouse have been studied in connection with the present paper from stomachs taken during September, October, November and December. It will be readily seen that grain was practically available at all times but it consists of only 7.63 per cent of the entire food taken. Insect matter composed 16.43 per cent of the entire food taken, leaving 75.89 per cent vegetable matter and .05 per cent grit.

The insect matter consists of Grasshoppers, Ants, Coleoptra etc.

One bird taken October third had eaten 95.2 per cent Grasshoppers and 4.8 per cent Vetch leaves. Another taken October 10th had eaten 27.1 per cent of Grasshoppers and 37.8 per cent Coleoptra making a total of 64.9 per cent insect matter, the balence of 35.1 per cent being vegetable matter not grains. Two other stomachs contained 19.1 per cent and 14.1 per cent of Coleoptra with no grain contents.

The lack of sufficient material to determine exactly the birds relation to insects is to be regreated, but enough is to hand to demonstrate the fact that the sharp-tailed grouse is the farmers' friend.

The vegetable food of the sharp-tailed grouse, so far as ascertained, comprises weed seed 41.15 per cent, grain 7.63 per cent; leaves buds and flowers 12.27 per cent,

fruit 2.34 per cent, rosehips 20.13 per cent, and .05 per cent grit; which makes up a total of 83.52 per cent vegetable matter and .05 per cent grit.

The weed seed element consisted almost entirely of black bindweed which is very injurious to the growing crops. One stomach contained 3,350 of these seeds which constituted 96.7 per cent of the food taken, another contained 2,926 and constituted 95.8 per cent of the food taken. Another stomach contained 1,208 seeds of the black bindweed which constituted 65.1 per cent of the food taken; and still another contained black bindweed to the extent of 700 which was 96.5 per cent of the food taken. These four Sharp-tailed Grouse had at one meal taken over 8000 seeds of one of the worst noxious weeds the farmer has to contend with.

But 28 per cent of the birds taken had partaken of grain in any form, and then only to the extent of 7.63 per cent. One bird taken in an oat field contained 657 kernels of oats which was 45.8 per cent of the entire food taken, but at the same time it had taken 490 seeds of the black bindweed and 245 vetch leaves, which constituted 52.2 per cent of its food. Another bird which had taken 426 kernels of oats or 23.1 per cent, took 1,208 seeds of the black bindweed or 65.1 per cent, nearly 3 to 1. Another bird taken Christmas day had eaten 87 kernels of barley and oats, equalling 34.8 per cent of the food taken, but at the same time it had taken 113 seeds of the black bindweed which was 45.2 per cent of the food taken. There being a light falling of snow at this time the bird probably scratched for its entire food.

Fruit constituted but 2.34 per cent of the food taken and was all of a wild nature- wild gooseberries.

Leaves, buds and flowers constituted 12.27 per cent of the food taken; this consisted of vetch, peavine, may-weed flowers, poplar and willow leaves and buds.

Rose hips constituted 20.13 per cent of the food taken. In one speciman rose hips amounted to 54.3 per cent; one

60. per cent and in another 63.1 per cent of the food taken.

Fruit of both the prairie rose and the sweet briar are eaten. In all probability, the stones of the rose hip help to grind the food in the absence of grit and are difficult to digest, and further more are thickly set with bristles which would irritate the human stomach but appears to cause no inconvenience to the grouse.

The consistent high colored hips are readily seen above the snow, and are a boon to the birds here in the winter where the struggle for existance is so bitter.

Noxious weed seed constituted 41.15 per cent of the Sharp-tailed Grouse's food, while grain taken amounted to only 7.63 per cent, a ratio of over 5 to 1. It is safe to state that at least half of the grain was gleaned from the field after the harvest was in, which would be a great benefit to the farmer. Insect matter amounting to 16.43 per cent was taken which was a creditable amount for the lateness of the season. Had the birds been taken during the late Spring and Summer this amount would probably have been more than doubled. Let it also be remembered that if it were not for Coyotes, Prairie Fires, and trespassing pot hunters the birds would be more abundant and their services correspondingly greater. However, the stomach examinations proves conclusively that the Sharp-tailed Grouse is in every sence the framers friend and helper.

The stomachs from which these examinations were made were taken from birds procured in the central part of Alberta, and I have no doubt that it represents a fair showing for birds which would be taken over practically any part of the prairie provinces, although in some sections, it may be possible that the birds may destroy a somewhat larger per cent of grain than is shown here.

PRAIRIE CHICKEN: Tympanuchus americanus americanus.

Length: 18 inches.

Male: Under parts with distinct brown and white bars of about equal width. A neck-tuft of ten or more rounded feathers.

Female: Like male, except neck tufts much smaller, whole tail barred. (Chapman)

Notes: A loud booming sound.

Season: A permanent resident where found.

Breeds: Throughout its range.

Nest: On the ground composed of grasses.

Eggs: 8 to 15 with a buffy or olive buff ground color, finely sprinkled with brown.

Range: At present through southern and central parts of Manitoba and Saskatchewan and some specimans have been found in eastern and central part of Alberta. These Grouse previously to the early 80's were not known in Canada except along the extreme southern border. About this time Mr. Seaton states one was taken near central Manitoba and a few years after one was taken near Portage La Prairie. They seem to be following up the advancement of civilization and appear to take more kindly to cultivated fields than does their near relative the Sharp Tailed Grouse. They are one of the best game birds, being quite large and the meat being of a delicious flavor. They are more usually found in the cultivated fields and low grounds, than in the uplands and semi-timbered portions of the country.

It is to be hoped that they will continue to follow up the advancement of civilization as they are realy and truly the farmers friend.

ORDER LIMICOLÆ: SHORE-BIRDS.

FAMILY CHARADRIIDÆ: PLOVERS.

KILLDEER: Oxyechus vociferus.

Length: 9–10 inches.
Male and Female: Gray-brown, washed with olive above; rump variegated with all shades of orange and reddish brown. *White frontlet and red eyelids.* Below white; collar and breastlet of black. Bill black; legs light.

Note: "Killdeér! kill-deér!"

Season: Earliest date of arrival April 17th, latest date of arrival April 20th, average date of arrival April 19th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout its summer range.

Nest: A hollow in the grass or sand in vicinity of *fresh water.*
Eggs: 4, the ground, as with the eggs of many Waders, varying from clay colour to cream, marked with brownish black.

Range: Manitoba, Saskatchewan and Alberta.

You may hear this Plover cry and yet never see the bird itself, though the black-banded breast, white frontlet, and red eyelids make it easy to identify.

It nests, usually, in the uplands near some body of water such as a lake, pond or small stream, making no nest but scooping out the dirt and depositing the eggs on the bare ground, sometimes a few grasses are laid without any regular arrangement.

According to Wilson, the Killdeers are somewhat nocturnal in their habits, especially in feeding upon the worms that then rise to the surface of the ground. Their loud cry — "Killdeer! Kill-d-e-e-r!" — has all the shrillness of the Jay's scream, and the Plover uses it frequently to mislead intruders or lure them away from his nest. Coues says that "they abound in the West, are not gregarious or maritime extensively, but somewhat irregularly migratory, and are very noisy birds."

FAMILY SCOLOPACIDÆ: SNIPES, SANDPIPERS, ETC.

Wilson's Snipe: ***Gallinago delicata.***

English Snipe.

ds: Far north.
ge: Nearly cosmopolitan, but chiefly in the Northern Hemisphere.
a broken wing
or. I took it , and it lay for some time
il we found that it could not be cured

PLATE 67. FIG. 1.

Length: 10.50–11.50 inches.

Male and Female: Straight greenish gray bill 2½ inches long; eyes set far back, as in last species. Above reddish and dark brown; sides of head and neck buff. Dark, plain wings, margined and tipped with white; tail bay and black, outer feathers dirty white, with brown bars; feet greenish gray.

Note: A peeping cry and a call very much resembling the croaking of a turkey.

Season: Earliest date of arrival April 13th, latest date of arrival April 30th, average date of arrival April 20th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout the summer range.

Nest: A hollow in ground or a bog tussock.

Eggs: 3–4, olive-gray washed with dull brown, marked on the larger end with umber spots and black scratches.

Range: Manitoba, Saskatchewan and Alberta.

The true Snipe of sportsmen, which is erroneously called "English Snipe." Wilson's Snipe has many qualities in common with the Woodcock. It is a bird of fresh-water marsh meadows, *Auk* for January, 1893, will easily see why

where it procures its food by probing for it in the soft mud, sometimes during the day~~time~~ but more usually toward the evening and in the early morning.

A very peculiar sound is made by this bird, probably the male, by ascending from 50 to 200 feet in the air where it flies very rapidly in an undulating flight. On the downward course it makes a peculiar buzzing sound, probably with its wings and beak combined, not unlike the sudden descent of the Night Hawk, although the sound is not so shrill.

PECTORAL SANDPIPER: Pisobia maculata.

Grass Snipe.

Length: 9–9.50 inches.

Male: Above black and reddish; white stripe over eye; neck short. Below whitish, washed on neck and breast with dusky, broken by brown lines. *Rump black;* wings dusky; some tail feathers tipped with white. Bill straight, half as long as head, flesh-coloured tipped with black. Feet dusky greenish.

Season:—Arriving throughout the range about the first of May.

Breeds: In the Arctic regions, some few remaining to breed throughout ~~xxxxxxxxxxx~~ Saskatchewan, and Alberta.

Nest: The nest is built with grass with a decided prefference for high and dry localities.

Eggs: 4 in number, grayish or greenish buffspeckled with brown.

Range: As a migrant through ~~xxxxxxx~~out Manitoba; sometimes breeding in certain localities in ~~xxxxxxxxx~~ Saskatchewan and Alberta.

A fresh-water Sandpiper, found in wet meadows with Wilson's Snipe. It comes in late summer from its northern breeding-grounds in flocks of variable size, and remains as long as the insects upon which it feeds hold out. Its habits are more like those of the Snipes than of Sandpipers, and its flesh has a similar sweetness, lacking the rankness of the true Shore-birds. It has a loud, wiry call: "Tweet-tweet-weet!" which it often repeats when on the wing. In the breeding-season the male has a curious habit of inflating his throat to a wonderful degree so that it hangs down upon the breast like a great tumour. It is a popular bird with gunners, and is known by them as Grass Snipe.

Greater Yellow-legs: ***Totanus melanoleucus.***

Stone Snipe.

Length: 13–14 inches.

Male and Female: Above dusky, spotted with black and white. Bill green black; over two inches long and slightly recurved. Below white, streaked sparsely with gray on the neck. Rump white, also tail feathers, which are barred with brown. *Long, thin, yellow legs.*

Season: A common migrant; May and August to November.

Breeds: In the cold temperate and sub-arctic portions of North America.

Range: Manitoba, Saskatchewan and Alberta as a migrant.

A handsome, noisy bird, commonly seen in flocks about sand bars, creeks, and inlets. It has a shrill voice and gives utterance to the most weird and startling cries when disturbed as well as during migration. When half a dozen of these birds converse the sounds are like the ejaculations of a collection of shipwrecked foreigners, each speaking a different tongue and mutually angry at not being understood. It is followed by sportsmen, though as an article of food its desirability is open to dispute.

YELLOW-LEGS. Totanus flavipes.

Length: 10.7~~XX~~ inches.

Male and Female: Similar to preceeding in color but smaller.

Note: Very much resembling that of the Killy Killy of the Sparrow Hawk.

Season: Earliest date of arrival April 13th, latest date of arrival April 30th, average date of arrival April 23rd in Alberta. Saskatchewan and Manitoba possibly a few days earlier.

Breeds: Throughout the summer range.

Nest: In low sloughy or muskeg places. Usually with very little lining.

Eggs: 3 or 4 in number grayish or buffy in color heavily ~~bx~~ blotched and spotted with brown and lilac.

Range: As a migrant throughout Manitoba and Saskatchewan, breeding through from Central Alberta northward.

When one approaches within about a quarter of a mile of their breeding haunts they immediately fly above and about one, uttering their cries and trying to lead the intruder away from their nesting site. I have found their nests located in the muskegs which were partially wooded and also in the more open hay lands, The nest is usually little more than a hole or depression in the ground or moss with a small amount of grass for lining. I have had them follow me from a half to three quarters of a mile away from their nesting site, all the time uttering their tell-tale cries.

These lesser ~~xxxx~~ tell-tales are fairly common throughout the central part of Alberta, and are to be found in nearly every available slough throughout this part of the country.

SOLITARY SANDPIPER: — — Helouromas solitarius solitarius.

Length: 8–9 inches.

Male and Female: Long, slender, dark bill. In breeding-plumage, dark brown above with an olive wash. Head and neck streaked with white; rest of upper parts spotted with white. Below white, with some dark streaks on the breast. Legs dull greenish. Markings less distinct in the fall.

Season: Arriving throughout its range the latter part of April or the first part of May.

Breeds: Throughout the summer range.

Nest: The solitary departs materially from the ways of the other Sandpipers as to nest building, it usually if not always, appropriates the nest of the Bronze Grackle, Robin, or the Waxwings and deposits its eggs without adding any new material. The nest may be located at any height from the ground.

Eggs: 3 or 4 in number clay colored spotted with brown and black.

Range: Manitoba, Saskatchewan and Alberta.

Not a true Shore-bird, but an inhabitant of the neighbourhood of wooded ponds and the margins of out-of-the-way watercourses; which, if startled from its seclusion, penetrates the underbrush rather than expose itself by flight. Wilson states that this Sandpiper lives in watery places in the mountainous region from New York State southwest to Kentucky, but that they are never numerous. Audubon notes the expert way in which they catch insects, saying that they are particularly apt in seizing small dragon-flies in their descent from the trees to the muddy pools where they breed. In this neighbourhood they are generally seen in pairs, and I have never noticed more than six or eight during any one season.

Throughout central Alberta these birds are the most common of the sandpipers, nearly every small lake and pond has its pair of Solitary Sandpipers either along its shore or in the immediate vicinity.

LE

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IDENCE

I have never seen more than three or four in a single flock, they are usually observed only a pair in each place. Their call is very peculiar, somewhat resembling that of the Sparrow Hawk, and like the Yellowlegs they are all the time uttering piercing cries when one is within t the vicinity of their nest, nor do they cease their cries until the intruder is far away and they think their nest or young is safe.

UPLAND PLOVER: Bartramia longicauda.

Field Plover.

Length: 11.75–12.75 inches.
Male and Female: Bill short, grooved, and tipped with black, but little longer than the head. Above dusky, varied with yellowish and gray, a pale yellow stripe through the eye. Lower wing coverts white, banded with dark gray. Below varying from white to buff, dark lines on breast, and spots on belly. Outer tail quills white, barred with black. Feet dirty yellow.

Season: Arriving throughout its range the last of April or the early part of May.

Breeds: Throughout its range.

Nest: A few straws and tendrils to keep the eggs together; in locations similar to those chosen by the Meadowlark.
Eggs: 4, gray or cream ground, with irregular umber spots.

Range: Manitoba, Saskatchewan and Alberta.

This species is classed as a Wading-bird, but is perfectly independent of water, and inhabits meadows and uplands, for which reason sportsmen call it the Upland or Field Plover. It announces itself on its arrival by a long, melodious whistle; it has several other cries in the breeding-

season, but they are the reverse of pleasing. After the young are hatched, they flock with the adults, visiting the grass fields and feeding more after the fashion of Meadow-larks than of Sandpipers. As the frost blasts the inland fields they gradually approach the shore. At this season they are very plump, with sweet, well-flavoured flesh.

Spotted Sandpiper: ***Actitis macularia.***

Teeter; Tilt-up.

PLATE 66. FIG. 1.

Length: 7.50 inches.

Male and Female: Slender, flesh-colour bill, black tipped, longer than the head. Above Quaker-gray, with an iridescent lustre, spotted and streaked with black. White eye line. White below, dotted with black; feet flesh-coloured. More dull throughout in winter.

Note: A gentle "peet-weet — peet-weet!

Season: Arriving throughout its range the latter part of April, or the first part of May.

Breeds: Throughout the summer range.

these birds converse the sounds are like the ejaculations of [illegible], each speaking a different tongue and mutually angry at not being understood. It is followed by sportsmen, though as an article of

Nest and Eggs: Resembling last species.

Range: Manitoba, Saskatchewan and Alberta.

This is the familiar little bird of roadside brooks and moist meadows, where the marsh marigold of spring is followed by the cardinal flower and gentian of autumn. To me it is indelibly associated with gentian meadows, for the first time that I ever throughly identified it I was balancing on a big grass hummock, wondering if I could step across a particularly deceitful looking bit of water, half ditch, half sluggish stream, to secure a plant of blue fringed gentian that branched like a magnificent candelabra with cups of lapis lazuli; — and this Sandpiper flew from an opposite tussock and gave its plaintive cry. Seeing that I did not stir, it walked unconsciously along the edge of the ditch, mincing and balancing in a curious way, jerking

plumage,

ieved to resident

in New England.

Range: North America, migrating southward as far as Brazil and

its body in see-saw fashion, which has given it the name of "Teeter." Every few minutes it flew to the grass, whispering to itself as it fed.

The Spotted Sandpiper possesses all the delicacy and beauty of a Song-bird, and it seems as much an act of cruelty to hunt it down for sport as if it was a Thrush or Oriole. It does not live in flocks.

Virginia Rail: *Rallus virginianus.*

PLATE 67. FIG. 2.

Length: variable, 8.50–10.50 inches.

Male and Female: General tone streaky and reddish. Above dark brown plainly streaked with olive, a white line from the bill extending over the eye. *Throat white.* Below bright reddish; wings dark brown; coverts chestnut; tail dark brown barred with white.

Season: The last of April or the first of May.

Breeds: Throughout the summer range.

Nest: A slight mat of grasses in a clump of reeds near water, usually in an inaccessible place.

Eggs: 6–8, resembling those of the last species.

Range: Manitoba and Eastern Saskatchewan.

A very pretty species, having a ruddy tint xuuvxvxuxgv avuudvut and is a perfect copy in minature, of the King Rail. It is impossible to give a definite range for this specie, but it is presumably found throughout Manitoba and Eastern Saskatchewan although many sloughs and meadows may be visited without observing it.

The Virginia Rail is very shy and will always hide, if possible, instead of flying, and it has the faculty of running across water upon a few floating sticks and bits of litter.

Dr. Coues, in his "Birds of the Northwest," in describing a night scene in Arizona near the Mojave River, where he suffered many hardships, speaks of the haunts of the Rail thus: "At nightfall some Mallard and Teal settled into the

rushes, gabbling curious vespers as they went to rest. A few Marsh Wrens appeared on the edge of the reeds, queerly balancing themselves on the thread-like leaves, seesawing to their own quaint music. Then they were hushed, and as darkness settled down, the dull, heavy croaking of the frogs played bass to the shrill falsetto of the insects. Suddenly they too were hushed in turn, frightened may be, into silence; and from the heart of the bullrushes, 'crik-crik-rik-k-k-k,' lustily shouted some wide-awake Rail, to be answered by another and another, till the reeds resounded. . . . The Rails are, partially at least, nocturnal. During such moonlight nights as they are on the alert, patrolling the marshes through the countless ways among the reeds, stopping to cry, 'all's well' as they pass on, or to answer the challenge of a distant watchman. That they feed by night, as well as by day, cannot be doubted. Their habit of skulking and hiding in the most inaccessible places they frequent renders them difficult of observation, and they are usually considered rarer than they really are."

Sora: ***Porzana carolina.***

Carolina Rail.

Length: 8–9 inches.

Male and Female: Bill only ¾ inch long, straight and stout. Above olive, brownish, and black, many feathers having white edges and with black and white barring on the flanks. Breast slate-colour, with some black on the centre of the throat. Tail dusky brown, darkest in centre, and almost pointed.

Season: Earliest date of arrival May 5th, latest date of arrival May 21st, average date of arrival May 13 in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout the summer range.

[illegible] from other species by the distinct drab ground-

Nest: In reeds, near water; a slight mat of marsh-grass, etc.

Eggs: Distinguishable from other species by the distinct drab ground- he colouring.

South America. rn

Range: Manitoba, Saskatchewan and Alberta.

This is the most common Rail which we have in the ~~ne~~ west
I have never located a nest of this species anywhere except
last years
in a tuft of grass where they are very cleverly hidden
and it is only by looking very carefully and parting the
grasses that it is possible to locate them at all;
They eggs are from six to ten in number of a ~~somewhat~~
creamish color, somewhat sprinkled and specked with
reddish and pale purple or lavender tint.

When on the wing the Sora usually flies in a straight line and with legs dangling. These birds have many foes and many nests are robbed of their eggs by Blackbirds, Marsh Hawks etc. I have also found the nests after they had been submerged by a very heavy rainstorm; part of the eggs washed out of the nest, all ~~being~~ deserted by the mother bird. These birds feed ~~both on~~ vegetable and animal food, ~~and~~ in all probability they are like the majority of other birds; feeding their young on insect matter and later exchanging it for vegetable diet.

American Coot: *Fulica americana.*

White-billed Mud Hen; Crow Duck.

Length: 14-16 inches.
Male and Female: Dark slate above, head and neck almost black. Whole edge of wing and tips of some quills white. Below paler gray, tail dark brown. Bill flesh-white with a slight rusty black mark at the tip. Feet pale dull green.

Season: Arriving throughout its range the latter part of April or the first part of May.

Breeds: Throughout the summer range.

Nest: Composed of reeds and slough grass without a lining.

Eggs: A dozen or more, shaped like Hen's eggs, ground gray with dark brown spots from the size of a pinhead to the size of a pea.

Range: Manitoba, Saskatchewan and Alberta.

The Coot, which is locally known as Mud Hen builds its nest

are always high and dry above the water, while the grebes and loons usually build in such a manner that their eggs are most always wet and when covered up the action of the decomposing reeds xxx etc cause the eggs to incubate while

T[illegible] are as expert a

swimming and diving as the grebes and loons. Their toes are not webbed, but are quite large for the size of the bird and lobed, apparently in order to make it much more convenient for them to walk among the reeds and rushes along the shore where they usually nest.

ORDER HERODIONES: HERONS, ETC.

FAMILY ARDEIDÆ: HERONS, BITTERNS, ETC.

American Bittern: *Botaurus lentiginosus.*

Stake Driver.

PLATE 68.

Length: Exceedingly variable, from 23–34 inches. (Coues.)

Male and Female: Above yellowish brown, much streaked and mottled with different shades of brown, from dark to light. Below buffy white, the feathers striped and edged with brown. Tail brown, small, and rounded. Bill yellow, edged with black; legs yellow-green.

Note: Several harsh sounds and a note resembling the blow of a mallet in driving a stake, hence its name Stake Driver.

Season: Earliest date of arrival May 1st, latest date of arrival May27th, average date of arrival May 17th in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout the summer range.

Nest: Composed of reeds and rushes, platform like placed on or between two tufts of grass; and all that I have found have been above the water about five or six inches.

This is the solitary Heron, of whom Hamilton Gibson

Eggs: 3 to 6 Brownish drab

Range: Manitoba, Saskatchewan and Alberta.

This solitary Heron, which is locally known as the stake driver, inhabits the marshy swamps and bogs and nests around their outer reedy edges.

By some it is considered to be a very melancholy disposition; but I have noticed him on several occasions when he appeared to be almost as happy as any bird could be expected to be, hoping about among the grasses and uttering a peculiar croaking chirp, now picking up a minnow, and now reaching out and spearing an unsuspecting frog; of course at times you see him sitting in a very dejected manner as it were, with his head pulled down between his shoulders, and looking for the world as though he had just lost his best friend.

Except in the breeding-season, it is an entirely solitary bird, and utterly averse to companionship. One of its habits, when disturbed in its reedy hiding places, is to stand motionless with its bill pointing skyward, thus merging completely with the surrounding marsh growth.

The American Bittern is not a nocturnal feeder, though his retiring habits lead people to think so; he probably migrates by night, but that is all. He seems to be a rather sluggish, selfish character, mysterious to us; simply because we cannot fathom his plan of existence. He eats and drinks, but is never merry, and maintains a stoical silence even, in the midst of a bog of plenty; a table fairly overladen with the frogs, lizards, snakes, etc., that his appetite craves. His long legs, which trail awkwardly behind him in flight, are said to act as a rudder to direct his course.

GREAT BLUE HERON: Ardea herodias herodias.

Blue Crane.

PLATE 69.

Length: 42–50 inches.
Breeds: Through its North American range.
Nest: Of sticks in a tree, seldom high up.
Eggs: 3–6, pale green.
Range: Canada and Oregon, southward to northern South America and the West Indies; rare in the arid interior.

That this Heron is the commonest and best known of its

Male and Female: Long, black crest, the two longest feathers of which are shed in the summer moult. Upper parts and tail bluish slate, below black and white streaked, forehead and crown white. Feathers about neck long and loose. Bill yellow and dusky; legs and feet dark. This Heron can be recognized by its great size and *bluish slate* back; it is not distinctly *blue* at all.

Season: Arriving throughout its range the latter part of April or the first part of May.

Breeds: Locally through range.
Nest: Usually a rude pile of sticks in a tree.
Eggs: 3, large, and of a dull bluish green.

Range: Manitoba and Saskatchewan and at least that portion of Alberta laying south of the North branch of the Saskatchewan River.

The Great Blue Heron, or as it is sometimes locally called the Blue Crane, is one of the largest birds which we have throughout this section of the country. They are not at all common throughout that part of Alberta which is drained by the Saskatchewan River although I know of several places where they nest each season. They are not at all a common bird; but in all probability more numerous than at first supposed on account of being somewhat shy. In some respects they are like the Bittern, at least in the way of trying to escape observation by remaining in an upright or any particular stationary position and trying their best to blend with t the landscape.

Their nests are a rude platform or pile of sticks usually located at as great a height as it is possible for them to build.

s. snakes. etc.. that his appetite craves. His ... like prized

Black-crowned Night Heron: ***Nycticorax nycticorax nævius.***

Qua Bird; Quawk.

PLATE 70.

Length: 23–26 inches.
Male and Female: Above either dull or greenish black; tail, wings, and neck grayish. Throat and forehead whitish. Below livid white. Crest of three long, white feathers rolled into one. Bill black; legs yellow.

Season: Arriving the latter part of April or the first part of May.

Breeds: The Canadian Catalogue of Birds states that this specie breeds as far north as Prince Albert Sask. and is not uncommon in Manitoba, breeding in marshes, but not recorded from Alberta. I have not seen this species anywhere throughout Alberta.

Nest: Nest not large, built in a very slovenly manner in treetops, usually in communities.
Eggs: 3–4, pale sea-green.

Range: Manitoba and Saskatchewan.

They are nocturnal, as the name indicates, and when you come upon them in their roosts by daylight they are dazed and sleepy, and use an effort to pull themselves together, but at twilight their heavy, dark bodies may be seen flying overhead, identified beyond question by the cry, "quok-quok," uttered at regular intervals. The sound is much like that emitted by the kid bellows of a child's toy rooster, and is the gazoo of the night orchestra. The skirl and boom of the Nighthawk have an eery sound, and the Whip-poor-will's cry is filled with vague foreboding; the Night Heron's merely suggests that he has half swallowed a particularly unappetizing frog, and wishes to unswallow it.

This is the most gregarious of all the Herons. Dr. Wood tells of a swamp some miles from East Windsor, Conn., which was the breeding-place of thousands. Samuels knew of a Heronry near Dedham, Mass., where a hundred pairs were collected in the space of an acre, and he at once realized the force of Wilson's comment on a like congregation, that, "The noise of the old and the young would almost induce one to suppose that two or three hundred Indians were throttling each other."

As the birds resort, year after year, to the same crowded breeding-grounds, it can be easily imagined that these Heronries are not the most attractive places for ornithological research.

I had very much doubted the present existence of such extensive colonies in populous regions, but Mr. Chapman in

ORDER ANSERES:

FAMILY ANATIDÆ: DUCKS, GEESE, ETC.

SUB-FAMILY MERGINÆ: MERGANSERS.

American Merganser: ***Merganser americanus.***

Fish Duck.

Length: 23.50–27 inches.

Male: Bill toothed, chiefly red. Head slightly crested, and with upper neck very dark glossy green; upper half of back black. Below, breast and part of the neck white, belly salmon. Wings largely white, banded with black.

Female: Smaller. Above brown and ash-gray, slightly crested

Season: Average date of arrival throughout Alberta April 19th.

Breeds: Throughout the summer range.

Nest: ~~XXXXXXXX~~ They build their nests in hollow trees, lining them with grasses and moss, and ~~finely with~~ down from the mother's breast.

Eggs: 6 to 10 of a creamy buff color.

Range: According to the Canadian Catalogue of Birds this specie breeds ~~northward~~ in the northern part of Manitoba and northwesterly to the Barren Grounds. In all probability they breed also throughout the northern part of Saskatchewan as I have found them breeding in the northern part of Alberta.

This species has the serrated teeth, the same as the other Mergansers, which indicates that it is a fish eater. In its winter home it is not considered as being fit for the table, but in its northern summer home, where it lives to a greater extent upon vegetable matter, by the time fall arrives, its flesh is ~~as~~ nearly as good eating as any of the other ducks throughout this region.

Another species associating with this is the Red Breasted Merganser whichbhardly differs from ~~this~~, save in the redness

of the upper breast and in having a long pointed crest. Both species appear to inhabit practically the same breeding and feeding grounds.

The hooded Merganser, also belongs to the same family, is somewhat smaller than either of the foregoing species, and has a beautiful black and white crest.

MALLARD. Anas platyrhynchos.

PLATE 71.

Length: 24 inches.

Male: Bill greenish yellow; head and upper part of neck brilliant, glossy green, a white colar dividing it from the chestnut-brown of the lower neck. Under parts and sides pale gray, waved with darker. Back reddish brown at top, growing dull near tail. Tail coverts black; tail mostly white; wings gray, white, and black. *Speculum*[2] shaded purple, bordered with black. Feet orange-red.

[1] Ducks feeding largely upon juicy vegetable matter, and not diving for their food. Feet smaller than those of the Sea Ducks, and more suited for walking.

[2] The secondary quills of the wings of Ducks usually exhibit patches of varied or iridescent colour; this coloured patch is called the *speculum*.

Female: Dull; under parts yellowish, blotched faintly with dusky; above back, brown; some feathers with rusty edges. Head and neck mottled like under parts.

Season: Average date of arrival in Alberta April 14th. Should arrive throughout Manitoba and Saskatchewan a few days earlier.

Breeds: Throughout the summer range.

Nest: Of dry grass, weeds, and feathers, on the ground near the water.
Eggs: 8–10, yellow, gray.

Range: Manitoba, Saskatchewan and Alberta.

This very handsome and beautiful duck is one of the most common throughout the range. It lives chiefly on a vegetable diet and has a very delicate flesh with a very fine flavor. I have located nests of this species nearly

a mile from any water and at other times I have found them quite close to a runnin stream or lake.

The nest is composed of ~~fine~~ course and fine grasses, usually, partially at least, lined, with feathers. The outer ~~edge~~ edge of the nest is woven in a peculiar net work fashion so that when the female leaves the nest she draws the edges toward the center thus completely covering the eggs and protecting them from any prying eyes which may be on the lookout for a meal. After the young are hatched they follow their mother to the water which ~~they~~ as a rule, They do not leave until they are ready to fly.

neck very dark glossy green: upper half of beak black. Below, ...s largely

GREEN-WINGED TEAL: Nettion carolinense.

PLATE 12.

Length: 14 inches.

Male and Female: Slightly crested. Head and neck rich chestnut, with a band of green on either side behind the eyes. Above waved bars of black and white. Wings dull gray. *Speculum* half purplish black and half a rich green, other wing feathers having chestnut, white, and purplish markings. Below whitish, turning to pale brown on the breast, clouded with distinct black spots; throat and sides waved black and white, like the back. Bill black; feet grayish. Female with less green on the wings and no crest; mottled brownish above.

Bate, signifying ... or saw-toothed

...: 6 to

...embedded in ...d soon came ...r water from

Season: Average date of arrival in Alberta April 20th, Manitoba and Saskatchewan a few da ys earlier.

Breeds: Throughout the summer range.

Nest: Usually a depression in the ground lined with d down from the mother's breast.

Eggs: 5 to 10 in number buffy white.

Range: Manitoba, Saskatchewan and Alberta.

The Teal Ducks are two very small species, with beautiful plumage and sweet, delicate flesh, which latter quality is accounted for by the fact that their food is mainly vegetable, — the seeds of numerous grasses, sedges, and other aquatics, small fruits and berries. They also eat grasshoppers and many other insects, and tadpoles as well.

BLUE-WINGED TEAL: Querquedula discors.

Length: 15-16 inches. PLATE 73.

Male and Female: Bill blackish. Head and neck purplish lead-colour, black crown, small white crescent before each eye. Back variegated dark brown and yellowish brown, and rump dark greenish brown. Wing coverts dull sky blue. *Speculum* beautiful green, between white bars. Below violet-gray, spotted with black on the breast and barred on the flanks. Feet light-coloured. Female much the same, the head being dusky, but retaining the bright wing markings. Other markings less distinct.

Season: Average date of arrival, April 21st, in Alberta, a few days earlier in Manitoba and Saskatchewan

Breeds: Throughout the summer range.

Nest: A depression in the ground lined with fine grasses and down from the mother's breast.

Eggs: 6 to 12 in number, buffy white, somewhat resembling those of the Green Wing.

Range: Manitoba, Saskatchewan and Alberta.

This species somewhat resembles the last in general habits, but throughout this locality at least it is not so plentiful. They inhabit practically the same localities and what may be said regarding one is in the main, true regarding the other.

SHOVELLER: Spatula clypeata

Length: 20 inches

[illegible] iridescent hues, - purple, bronze, green, etc.; *speculum* green. Feathers on flanks lengthened, and variegated black and white. Legs and feet yellowish.

Female: Crest slight or wanting. Gray head and neck, below mottled gray, brown, and white, above glossy brown. Wings like the male, but the contrasts much reduced.

Note: "Peet-peet, oe eek! oe eek!"

Season: A summer resident

Samuels has seen the Green-winged Teal associate [illegible] the Ducks in a farmer's yard or pond, and has known t[illegible] to come into the barnyard with tame fowls and share corn thrown out for their food.

Male: Bill much broader at tip than base; belly chestnut; breast around to back, white.

Female: Wing coverts blue; back conspicuously margined with buff. (Chapman)

Notes: Occassionally a few feeble quacks. (Elliot)

Season: Average date of arrival in Alberta April 23rd, The date of arrival throughout Manitoba and Saskatchewan will be a few days earlier than this.

Breeds: Throughout the summer range.

Nest: Composed of dead weeds and grasses lined with down from the mother's breast.

Eggs: 7 to 10 greenish or leaden cast color.

Range: Manitoba, Saskatchewan and Alberta.

This bird is very easily identified by its broad flattened beak which assumes a proportion of at least twice the width at the point that it is at the base.

This bird inhabits the northern hemisphere and breeds both in the old and new World. It is not looked upon with the same pride by the sportsman as the Canvas Back, Mallard, and Teal although its flesh is practically as good as any of the three except when it has been feeding profusely upon fish which is not often. The notes of this species resembles somewhat that of the Mallard, although they are not quite so clear and distinct.

Pintail: *Dafila acuta.*

Sprig-tail.

PLATE 79. FIG. 1.

Length: Variable; sometimes 30 inches, according to the development of the tail.

Male: Bill bluish black. Head and half of neck greenish brown; black and white stripe on either side of neck. Back and sides waved with soft gray and black. Wings generally gray; *speculum* purplish green between white, a bar in front, and a black and white bar behind. Tail long, black and gray. Below whitish, with black wavings on the sides. Feet lead-blue.

Female: Wing markings faint, only a trace of the *speculum;* tail shorter; generally mottled above with black and yellowish brown; below pale ochre-brown.

Season: Average date of arrival in Alberta April 17th. The date of arrival in Manitoba and Saskatchewan wil possibly be a few days earlier.

Breeds: Throughout the summer range.

Nest: Of litter on the ground.
Eggs: 6–12, greenish clay colour.

Range: Manitoba, Saskatchewan and Alberta

Very graceful ducks of trim ~~billed~~ bill and beautifully ~~mottled~~ marbled feathers, long body and well shapd head. Their flesh is excellent and is much sought after by the sportsman. These birds respond very readily to the call of the hunter and will drop down very suddenly into a bunch of decoys often to their utter destruction. These birds are not as numerous throughout central Alberta as the Mallard and Teal, although in certain localities and on certain ponds and lakes they are quite common. They usually nest a short distance from the water, the nest being a depression in the ground lined with grass and a few feathers from the breast of the mother. The eggs do not usually run above ten in number and can be distinguished from those of the Shoveller by their somewhat larger size.

REDHEAD: Marila americana.

American Pochard.

PLATE 74.

Length: 20–23 inches.
Male: Not crested, head and neck a warm chestnut; bill dull bluish with black terminal band. Above ash waved with black lines, giving a silvery hue. Below white, waved with black; lower neck, fore parts of body and lower tail coverts blackish. Tail grayish brown. Wings gray with white specks; *speculum* whitish ash, bordered with black.

Female: "Wholly brown forehead and cheeks tinged with red."

Season: Average date of arrival throughout Alberta April 28th, Saskatchewan and Manitoba possibly a few days earlier.

Breeds: Throughout the summer range.

Nest: The nest is located on the ground, usually in slough or marsh, composed of grasses lined with the down from the mother's breast.

Eggs: From 7 to 15 buffy white.

Range: Manitoba, Saskatchewan and Alberta.

These ducks are fairly common throughout the region but not as common as the Mallard. They very much resemble the Canvas Back, usually nesting in the same locality and in fact sometimes depositing their eggs in the same nest. As far as I can observe the ~~KXX~~ Redhead is practically as good a table bird as the Canvas Back.

GADWALL: Chaulelasmus streperus.

Length: 19.5 inches.

Male: Under wing coverts and axillars pure white; wing-coverts chestnut; breast ringed with white;

Female: Head and throat, as in male, back fuscous and buffy; breast and sides ochraceous thickly spotted with blackish; speculum ashy grey and white.

Notes: A squack like that of the Mallard but shriller and more often repeated. (Chapman)

Season: Arriving throughout the region the latter part of April.

Breeds: Throughout the Canadian range.

Nest: Nest on the ground lined with ~~xxdxc~~ feathers from the mother's breast.

Eggs: From 6 to 12 creamy buff.

Range: Manitoba, Saskatchewan and Alberta.

The general appearance and habits of the Gadwall is quite similar to that of the Mallard and Widgeon. The name Widgeon is indiscriminately applied to the Gadwall and

Baldpate as well as the American Widgeon. The Gadwall is usually found in company with other water fowl during its migration at which time it inhabits the rivers and lakes of the regions in considerable numbers. The food consists of both animal and vegetable matter and is principally obtained from the surface of shallow ponds and lakes. While the bird is feeding its body is partially submerged as it probes about under the water for food.

CANVAS-BACK: Marila Valisineria.

Length: 20-22 inches.
Male: Bill blackish, 2½ inches long, or not shorter than the head. Above waved black and white, head tinged with black in front, and a rich glossy chestnut neck and back to head. A brownish black collar across upper breast, below whitish; sides dusky. Tail slatish, feathers pointed. *Speculum* white.

Season: Arriving throughout the range about the 23rd of April.

Breeds: Throughout the summer range.

Nest: The nest is placed on the ground, sometimes lined with a few grasses with an inner lining of down from the mothers breast.

Eggs: 6 to 10 in number of a slightly darker shade than that of the Redhead.

Range: Manitoba, Saskatchewan and Alberta.

The favourite Duck of dinner parties and suppers, where it divides the honours with diamond-backed terrapin. The particular flavour of its flesh, when at certain seasons it feeds on *vallisneria*, or wild celery (which is not celery at all, but an eel-grass) won its fame. But as this eel-grass is a local plant, not growing all through the range of the Canvasback, and as when the celery is lacking it eats frogs, lizards, tadpoles, fish, etc., a certificate of residence should be sold with every pair to insure the inspiring flavour.

The biography of this Duck belongs rather to the cookbook than a bird list, and in fact even its most learned biographers refer mainly to its eatable qualities, and Dr. Coues even takes away its character from that standpoint, saying, "There is little reason for squealing in barbaric joy over this over-rated and generally underdone bird; not one person in ten thousand can tell it from any other duck on the table, and only then under the celery circumstances."

[illegible] DUCK: [illegible]

Length: 16.5 to 17 inches.

Male: Head glossed with purplish; sides with distinct black bard;

Female: Breast and back rusty grayish brown; speculum white.(Chapman)

Note: A peculiar barking sound.

Season: Arriving throughout the range about the middle of April.

Breeds: Through the Canadian range.

Nest: The nest is located in the hay marshes or meadows and composed of grasses and lined with feathers.

Eggs: 6 to 10 pale greenish gray.

Range: Manitoba, Saskatchewan and Alberta.

The Lesser Scaup, or as it is locally known the Blue Bill, is a very swift flying duck and is equally skillful at diving. When hunting these ducks it is absolutely necessary to kill them at the first shot or they are very apt to dive and you will never see them again. It is claimed by some hunters that they will dive to the bottom of a slough and anchor themselves by their beaks to some object ~~under~~ neath the water, remaining there with their jaws set in their death grip.

It is one of the commonest ducks of the prairie region and northward to the very edge of the Barron Ground. It breeds in all the ponds and by the little lakes from the International Boundry Line to and beyond the arctic circle, so states The Canadian Catalouge of Birds.

RING-NECKED DUCK: Marila collaris.

Length: 16 ½ inches.

Male: A chestnut neck-ring; chin white ; back black; speculum [illegible].

[illegible] at a time when there is little bird li[illegible] the account. The Whist[illegible]

Female: Feathers about sides of base of bill and throat white; back and breast rusty greyish brown; speculum grey. It very much resembles the female of the Redhead but is smaller and rustier. (Chapman)

Season: Arriving throughout the range about the middle of April.

Breeds: Throughout the summer range.

Nest: In the swamps or sloughs lined with grass and feathers.

Eggs: 6 to 12 in number of a lead grey color.

Range: Manitoba, Saskatchewan and Alberta.

The Ring-neck Duck belongs to the same family as the Scaup and its habits, nesting site etc. do not differ materially from it.

black and white; *speculum* white. Bluish feet; claws black

Female: Head and fore parts rusty brown, upper parts rusty black, with some white wavings. Below white, and a conspicuous white patch on forehead.

GOLDEN-EYE: Clangula clangula americana. 1 Novem-

Whistler.

Length: 17–20 inches.
Male: Head with puffy feathers, and neck glossy green. Above blackish; below generally whitish. Much white on the wings. *Iris golden yellow*, a round, white spot before the eye. Feet orange-coloured; bill black, tipped with yellow.
Female: Head snuff-brown, upper parts brownish, lower parts marked with grayish; less white on wings.

Season: Arriving throughout its range the latter half of April.

Breeds: Throughout the summer range.

Nest: Nest in hollow tree cavities lined with feathers from the mother's breast.

Eggs: 6 to 10 eggs of a greynish color.

Range: Manitoba, Saskatchewan and Alberta.

For beauty this bird will compare favorably with any other family which we have in Candda. Whistler is the name by which it is most commonly known from the peculiar noise made by the wings while flying. In spite of its heavy body and small wings it covers immense distances

in a very short time. It is credite of obtaining a speed something over sixty miles an hour whether or not this is true I am not certain; but I am certain it is one of the most rapid flying ducks which we have. It is an abundant species throughout the region where it frequents the rivers and lakes in considerable numbers.

The Barrow's Golden-eye which very much resembles this species except, instead of having a white patch below and in front of the eye, it has a crescent shape mark somewhat resembling a new moon. This latter species may be met with in certain parts of the range but is not common enough to need a seperate space for discription.

Bufflehead: *Charitonetta albeola.*

Length: 12.75–15 inches.
Male: Above black, neck, shoulders, and all below white. Head puffy, purplish green, with a large white patch on the nape extending to front of eyes. Wings largely white; tail black. Bill short, about 1 inch.
Female: Above blackish with white streak on each side of head, below whitish.

Season: Average date of arrival throughout central Alberta April 20th, Manitoba and Saskatchewan probably a few days earlier.

Breeds: Throughout the range.

Nest: In tree cavities lined with down from the mother's breast.

Eggs: 6 toz 14 creamy white.

Range: A summer resident through all the timbered country throughout Manitoba, Saskatchewan and Alberta.

A handsomely plumed Duck with a puffy head; to be found by inland ponds and rivers that remain unfrozen, as well as on the coast. It is a cunning diver, and obtains its food in this way; it is said, that the Bufflehead, like the Grebes and Loons, will dive at the flash of a gun, and remain under water with its bill alone visible.

Samuels writes that, "When several of these birds are together, one always remains on the surface, while the others are below in search of food, and, if alarmed, it utters a short *quack*, when the others rise to the surface, and on ascertaining the cause of the alarm, all dive and swim off rapidly to the distance of several hundred feet."

OLD-SQUAW. Heralda hyemalis.

The Old Wife.

PLATE 75.

Length : Depending on the tail development, up to 23 inches.
Male : *In winter*, head and neck white, with gray cheeks; above varied with black and white. Breast blackish; belly white. Four middle tail feathers blackish and very long. Wings grayish; no *speculum*. Bill black, tipped with orange; feet dark.
Female : Dusky brown, paler on throat, whitish below. White patch around eye and on side of neck.

Season: Migrating through the range about the middle of April.

Breeds: Throughout the summer range.

Nest: On the ground composed of weeds and grasses.

Eggs: 7 to 12 buffy.

Range: This species is somewhat rare throughout the region but is met with quite often in Alberta and Saskatchewan during the migratory season.

These birds do not nest throughout the region in any locality known at present, unless it be the extreme northern limits of the three provinces. They appear to be quite pleantiful on some of the larger lakes during the migration period and appear to be much sought after by a great many of the sportsmen.

WHITE-WINGED SCOTER: Oidemia deglandi.

CANADIAN EXPRESS COMPANY
CORRESPONDENCE

...n winter, to New Jersey, the Great Lakes, and California.

...ile or

...Length: 22 inches.

...ecific is wonderfully tough and flexible, and is often ...

Male: Black; A white patch on wing; feathers extending forward along the sides and top of bill nearly to nostrals. A white spot about eye; bill orange black at base.

Female: Dusky brown above; lighter below. (Chapman)

Season: Arriving throughout its range about the middle of April.

Breeds: Breeds throughout Alberta and Saskatchewan and probably the northern part of Manitoba.

Nest: On the ground usually under bushes composed of grasses lined with feathers.

Eggs: 5 to 8 of a pale buff color.

Range: Manitoba, Saskatchewan and Alberta.

These birds are quite common throughout the larger lakes of Central Alberta, but are somewhat shy and are quite difficult to approach. When one gets within about one hundred fifty yards of them, they usually take flight and dropdown several hundred yards away from the boat where they are certain of being in perfect safety. These ducks are on the open list in Alberta and can be shot at any time, therefore the Indians, and a great many white men for that matter, kill, not only large quanities of these but other ducks as well and call them Black Duck which is the local name of this specie.

RUDDY DUCK: Erismatura jamaiccensis.

Length: 15 inches.

Male: Cheeks white, cap black; back reddish brown.

Female: A whitish streak through dusky cheeks; back greyish brown with fine buffy bars; belly silvery whitish. (Chapman) The tail feathers of both male and female are narrow and stiff, bill short.

Season: Arriving throughout its range the middle of April.

Breeds: Throughout the summer range.

Nest: Located on or near the ground in rushes generally near the water..

Eggs: 6 to 12 greyish white.

Range: Manitoba, Saskatchewan and Alberta.

This species can be very readily identified by its bristly tail feathers, rudy back, white cheeks and blue bill.

I observed a pair of this species last summer through the binoculars for some time, the markings above discribed show up very distinctly while resting upon the water. The nest is located along the shore among the reeds.

The flesh of these birds is very good to eat, not differing materially from that of the Teal or Mallard.

SUB-FAMILY ANSERINÆ: GEESE.

CANADA GOOSE: Branta canadensis canadensis.

Wild Goose.

PLATE 76.

Length: 3 feet or more.

Male and Female: Dark ash; head, neck, and tail black; cheeks and throat white; bill and feet black. Short, rounded tail of pointed feathers. Wings dark brownish, with paler edges. Below a dirty white. Bill and feet black. Female paler.

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Season: Arriving throughout the region the first half of April.

Breeds: Throughout its Canadian range.

Nest: They construct a somewhat large nest of weeds and grass warmly lined with feathers, usually placed on the ground but some records state they have found them nesting in trees.

Eggs: 4 to 9 of a buffy or drab color.

Range: Manitoba, Saskatchewan and Alberta.

This Wild Goose, even when only seen casually, is easily identified by its great size, being almost twice as large as the Brant, the only other common species. Its distinctive mark, other than size, is a broad, white band that extends like a handkerchief folded cornerwise under its chin and tied on the top of its head.

The flight of the Goose is heavy, but very impressive. Geese usually form in two columns, meeting in front on either side of the experienced leader, forming a wedge. In the late autumn of 1892, I saw this flock-formation take place near Weston Mill Pond shortly before dark. The Geese arose in a straggling column from some cat-tail flags, in what, to me, seemed the greatest state of confusion, but before they had gone a hundred feet the line had divided into the wedge shape, though it was rather irregular. The *honking* call seemed to come from several individuals, and not from the leader alone.

Upon other occasions I have seen small flocks fly over the meadows in almost a straight line. The honking of Geese is a strange, unbird-like sound, and when they pass over at night and you hear the fanning of their wings it seems as if some sleeping cloud-goblin had awaked himself with a sudden snore. As these Geese feed mainly upon vegetable food their flesh is good, and they are perpetually harried by gunners.

American Herring Gull: ***Larus argentatus smithsonianus.***

Winter Gull.

PLATE 77. FIG. 1.

Length: 24–25 inches.

Male and Female: Winter dress: above pure light gray, head and neck streaked with dusky, under parts and tail white, the latter having an imperfect dusky bar; wing coverts mottled with gray. Bill yellow.

[illegible] the back and neck being more or less glossy. Bill [illegible]

Seasons: Arriving throughout the range the latter part of April.

Breeds: Throughout the Canadian range.

Nest: Hollow in the ground lined with a little grass or a few seaweeds.

Eggs: 2–3, ground colour dirty white, tinted with pale blue or green deepening to brown, with numerous brown and black spots and markings.

This small Goose, hardly larger than the Red-headed Duck, is the common species of the Atlantic coast. It is not so well known among amateurs as the Canada Goose, but this may be accounted for by its sometimes being mis-

Range: Manitoba, Saskatchewan and Alberta.

The common Gull, both of coast and interior, seen in great flocks about the beaches, and on the flats and sand bars at low water. From middle autumn until the birds in general are returning in the spring, these Gulls enliven the solitude of the shore with their chatter, and their shrill, high-keyed voices can be heard above the waves and storm.

Beside being beautifully plumed and decidedly picturesque objects in the marine picture, they have an economic value which appeals even to the most unsentimental minds. They are excellent scavengers, taking from creeks, bays, and rivers, as well as from the lakes and open sea, much refuse that becomes unsavoury if washed ashore and left to decompose.

Bonaparte's Gull: *Larus philadelphia.*

Length: 14 inches.

Male and Female: Head and upper neck dark lead-colour; bill black; back "gull-blue." Rump and tail white; also under parts. Wings white and gull-blue. In winter the head is white, with dark spots. Legs and feet light red.

Season: Arriving throughout its range the latter part of April.

Breeds: Throughout its Canadian range.

Nest: Composed of sticks placed in the marsh.

Eggs: Three in number, greyish or greenish brown marked with lilac and dark brown.

Range: Manitoba, Saskatchewan and Alberta either as a migrant or as a summer resident.

These birds are very graceful flyers, their flight being quite distinctive. Upon the downward movement of the wings the body of this species seems to be raised upward as though the body were as light as a feather and upon the raising of the wings the body appears to be pushed downward thus forming a slight undulating motion of the body.

These gulls are fish eaters and throughout their stay in the region may be seen hovering over the water watching for their prey and suddenly making a downward swoop to the very surface of the water and returning with a snail or

small fish, which they feed upon very largely.

RINGED-BILLED GULL: Larus delanarenis.

Length: 18 inches.

Male and Female: Bill greenish yellow; a black band across tip; ends of primaries black, a white spot near tip of outer one. (Chapman)

Season: Arriving throughout the range the latter part of XXX. April.

Breeds: Throughout its Canadian range.

Nest: Usually on the ground, composed of grasses.

Eggs: Usually 3, greyish or brownish marked with lilac or brown.

Range: Manitoba, Saskatchewan and Alberta.

These Gulls live principally on fish, but they also devour great numbers of insects; they are also credited with eating carrion like the vultures. Wilson says that the Gull, when riding XXXXXXX bouyantly upon the waves and weaving a sportive XXX dance is employed by the poets as an emblem of purity or as an accessory to the horrors of storms by his shrieks and wild piercing cries.

Common Tern: *Sterna hirundo.*

Sea Swallow.

PLATE 77. FIG. 2.

Length: 14.50 inches.

Male and Female: Bill long, coral-red at base, black toward end and tipped with yellow. Upper head and back of neck black. Entire back and wings light gray with a bluish wash. Tail coverts, most of tail, and wing linings white; belly and sides of breast grayish white; other lower parts white. Legs and feet light red.

Season: Arriving throughout its range the middle or later part of May.

Breeds: Throughout the summer range.

Greeos.

Nest: None; eggs laid on the sand and indistinguishable from those of other species.

Eggs: 3, sometimes 4. Buffy spotted with black or brown.

Range: Manitoba, Saskatchewan and Alberta.

The characteristics of this Tern are the black cap, coral-red bill, legs, and feet.

The Terns are not distinctly different from the Gulls, the size of some being identical; but the Terns have a more trig, thoroughbred build, and bear the same relation to the more ponderous Gulls that a yacht does to a trading-craft of equal tonnage. The Terns have long, sharply pointed wings that give them a Swallow-like dash in flying either over the surface of the water when fishing, or above the reed beds when searching for insects, some species being partly insectivorous. This free, angled flight has given this species the name of Sea Swallow.

When flying over the water in fishing, they hold their beaks at right angles with their bodies, instead of poking them forward like the Herons, which attitude makes them, Dr. Coues says, "curiously like colossal mosquitoes."

Terns were very plentiful twenty years ago, but the persecution for millinery purposes has thinned the ranks pitifully; and the survivors keep more and more aloof, until it seems as if an absolute change in the bird's range will be the result.

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BLACK TERN: Hydrochelidon nigra surinamensis.

Length: 10 inches.

Male and Female: Head and under parts black; back, wings and tail slate. (Chapman)

Season: Arriving throughout its range the middle or later part of May.

Breeds: Throughout the summer range.

Nest: Reedy platform of decayed vegetation either floating in the water or close to it.

Eggs: Usually 3, deep greenish brown spotted with brown and black.

Range: Manitoba, Saskatchewan and Alberta.

These birds are quite numerous throught the summer range breeding in almost every available slough throughout the region.

The nest is generally a very reedy affair constructed of decayed vegetation sometimes a few sprigs of green grasses are mixed in with the older materials. I have noticed these birds while building the nest within a short distance of the house where they would carry nesting material for miles from other lakes when there was an abundance of nesting material within a few feet of their own nest.

When one approaches any ways near their nesting site they surround the invader with loud cries of alarm which very soon arouse the entire colony. If the nest contains eggs or young I have known them to swoop down and strike the person on the top of the head with their wings or breast. After leaving the vicinity they will follow a person a considerable distance to make sure that they will not return.

Family Savidae Loons

LOON: Gavia immer.

Great Northern Diver.

PLATE 78.

Length: 31–36 inches.

Male and Female: Head, throat, and neck iridescent green, blue, and purplish. Triangular patches of black and white streaks on either side of the throat, almost joining at the back and narrowing in front. Above spotted black and white. Breast streaked on sides with black and white; under parts white. Bill dark yellowish green.

Season: Earliest date of arrival April 25th, latest date of arrival May 7th, average date of arrival May 2nd in Alberta. Manitoba and Saskatchewan possibly a few days earlier.

Breeds: Throughout the summer range

Nest: In some localities no nest is made, the eggs being deposited on the bare sand or gravel near the water. In central Alberta I have always found them building nests from reeds or rushes from along the shore of the lakes and occasionally using a deserted muskrat house.

Eggs: 2 in number, dark greenish brown with brownish or blackish spots.

Range: The Canadian catalogue of birds states, on the authority or Raine, that these birds breed at the south end of Lake Manitoba, they nest very abundantly throughout central Alberta and it is only reasonable to believe that they nest throughout the province of Manitoba.

The Loon is one of the most common of the diving birds throughout the region, inhabiting nearly every lake of any extent and in cases where the lakes are quite large two or more pairs use it for their nesting site. The nests,

throughout Alberta, that I have seen of this species, are located on the edge of a lake so that the female, while incubating if disturbed, can dive immediately into the water and thus escape from any injuries she might receive from any one attempting to destroy her or her eggs. The legs of the Loon are placed very far back, so it makes it very difficult for the Loon to walk on dry land but at the same time it is a great assistance to the bird in the water as it is an expert diver staying under the water for a considerable length of time. These birds are really of no benifit to the farmer or to anyone concerned in agriculture; their esthetic value is great however, for what would the appearance of a lake or pond be in the summer if it were not inhabited by a pair of these interesting birds, and as they do no damage whatever to any of man's interests why not protect them and leave them to enjoy life the same as if they were a great benifit to man in many ways.

FAMILY COLYMBIDAE GREBES.

WESTERN GREBE: Aechmophorus occidentalis.

Length: 26 inches.

Male and Female: Crown and hind neck black; back greyish brown; sides of head, fore part of neck and under parts white.

Notes: A rattling whistle uttered quite loudly.

Season: Arriving throughout the range the latter part of April.

Breeds: Throughout its summer range.

Nest: Composed of decayed vegetation placed in the water near the edge of a lake or pond.

Eggs: 4 to 6 of a chalky bluish white stained by the nesting material to a buffy color.

Range: Manitoba, Saskatchewan and Alberta.

These are the largest of the Grebes in North America and are the most gracefull in appearance. They have a very long neck and are frequently called "Swan Grebes".

They are the most timid and shy of any of the Grebe family and are very difficult to approach. I noted a pair last summer that would come out in the center of the lake where I watched them for considerable time with field glasses, and noting the direction that they took I started out with the boat to see if I could get near them, but as soon as they saw me coming in the boat they would immediately dive and head for the shore and conceal themselves in the reeds along the lake, probably not to be seen again until the following day when I would again observe them through the field glasses. One pair only nested on this large lake during last summer but several other pair nested around throughout the immediate vicinity.

HOLBOELL'S GREBE: Colymbus holboellii.

Length: 19 inches

Male and Female: Crown, xxx xxxxx forehead and hind neck glossy black; back blackish; neck rufous; throat, cheeks and under parts white.

Notes: K-a-r, K-a-a-r, K-a-a-r, repeated several times in a very peculiar gutteral tone which is very difficult to describe.

Breeds: Throughout the summer range.

Nest: Composed of decayed vegetation located on the edge of a lake or pond.

Eggs: From 3 to 6, pale blue incolor, always coated over with a thick chalky deposit and usually xx nest stained to a dirty white.

Range: Manitoba, Saskatchewan and Alberta.

This is the Grebe that, to my notion utters the most unearthly yells of any of the birds throughout the region except, possibly, the loon which when uttered in unison xxxx xxx xx produced a sound which will make almost anyone's hair stand on end. They nest very abundantly throughout central Alberta where they locate their nests along the

edge of the sloughs or lakes. These nests are usually anchored to the bottom of the lake or to reeds along its border but this is not always the case for I have found them on one side fo a small pond one day and on the opposite side the day following. They always remain with their nests however, and do not seem to desert it because it has changed its place of abode. The wite patch under the throat, very much resembling that of the Cnada Goose, and its red neck are distinctive markings and cannot be mistaken for that of any other Grebe.

The flesh of these birds are not really fit for the table as they taste very rankly of fish; the feathers are very hard to remove from the body as one will find if they try to pluck these birds. The breast of these birds are a beautifully glossy white and, until a few years ago at least, were used very extensively for millinery purposes. This style, however, has fortunatly about dissappeared and the birds are usually left undisturbed in their haunts

Horned Grebe: *Colymbus auritus.*

Length: 14 inches.
Male and Female: In spring, prominent crests forming two yellow-brown horns; rest of head puffy and glossy black. Above dark brown, with edgings of gray and black. Neck, upper breast, and sides rusty brown; some white on wings. Young without horns; neck and lower parts whitish. Bill black, with yellow tip.

Season: Arriving throughout the range the latter part of April.

Breeds: Throughout the summer range.

Nest: Composed of decayed vegetation like the preceeding.

Eggs: From 5 to 8 Buffy white, nest stained.

Range: Manitoba, Saskatchewan and Alberta.

These curiously constructed birds are expert swimmers, but very helpless on land. They have no tails to speak of, and in the breeding-season wear variously feathered head-dresses which give them a ludicrous appearance, and make them veritable caricatures. But if you presume upon this apparent stupidity, and try to approach them, you will be very much surprised at the speed with which they slip from the shore and dive out of sight; not with a splash, but sinking like lead, and escaping by swimming under water, with the head alone visible. When inhabiting the coast the Grebes live upon fish, but when inland they subsist upon fresh-water newts, frogs, insects, and sometimes the seeds of grasses.

EARED GREBE: Colymbus nigricollis californicus.

Length: 13 inches.

Male and Female: Above neck all around, and upper breast brownish black, cheek tufts yellowish brown; flanks chestnut; belly white. (Chapman)

Notes: A peculiar clanking cry slightly resembling that of the Holboell's Grebe.

Season: Arriving through the range the latter part of April or the first part of May.

Breeds: Throughout the summer range.

Nest: Like the preceeding species.

Eggs: 4 to 9 white with a usual chalky and discolored appearance.

Range: Manitoba, Saskatchewan and Alberta.

What is said regarding the Horned Grebe and that of the Holboel's Grebe is practically true regarding this species as its nesting habits appear to be identical with that of the preceeding and I cannot see that they are either more numerous or less so than the Horned Grebe.

Pied-billed Grebe: ***Podilymbus podiceps.***

Dipper; Dabchick.

PLATE 79. FIG. 2.

Length: 13 inches.

Male and Female: Some bristling frontal feathers, but no regular horns. Above dark brown, showy black markings on chin and throat. Breast and lower throat yellowish brown, irregularly spotted and barred, on the upper parts, lower parts glossy white. Wings brown, gray, and white. Bill spotted with blue, white, and dusky, and crossed by a black band, hence Pied-billed.

Season: Arriving throughout its range the latter part of April.

Breeds: Throughout the summer range.

Nesting: Habits similar to the last species.

Range: Manitoba, Saskatchewan and Alberta.

This Grebe is never as common throughout the region which it inhabits as any of the former species, in fact, one might say that it is no where abundant but represented practically everywhere throughout its range. I have not found this species quite as noisy as any of the preceeding and it may be very easily overlooked.

This bird, Grebe fashion, always conceals its eggs by placing over them the decayed vegetation when leaving ~~their~~ the nest in search of food or when disturbed, providing they have time to do so. This is probably done for two reasons, first to conceal the eggs from ~~any~~ prying eyes, and second, to keep them warm so that incubation may not be retarded; incubation begins as soon as the first egg is deposited, therefore when the eggs hatch we may have two or three young grebes swimming about in the water while the other eggs are as yet unhatched. The mother is very attentive at this time, watching her young very closely and also guarding her nest which conatins the unhatched eggs.

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